Improving the Education of Minnesota’s Students from Pre-K through College

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- Attorney Perspectives on Immigrant Detentions
- Advancing Neighborhood Goals through CDCs
- Designing a Social Welfare Safety Net for Low-Income Workers
- Estrogen Mimics in Industrial Wastewater
- Somali Entrepreneurs in Minneapolis
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Minnesota is a national leader in educational outcomes and, on many indicators, provides a national model of performance. However, Minnesota also faces many educational challenges, including achievement gaps among subgroups of students. Nationally, many educational outcomes for pre-kindergarten to 12th grade (P−12) are well defined and have been tracked for years.¹ However, the current federal regulations regarding school accountability (largely due to the No Child Left Behind Act that was enacted in 2001) define school success in a very narrow way, typically performance on a single-event state exam, attendance rates, and graduation rates. Schools continue to struggle with identifying the means to address critical issues of success for students in some subgroups, particularly students of color, students from families in poverty, students who are English-language learners, and students receiving special-education services.

In the higher education arena, outcomes are poorly defined and not tracked to the extent seen in P−12, and outcomes and measures of success are generally less visible. In *A Culture of Evidence: Postsecondary Assessment and Learning Outcomes*, Educational Testing Service researchers stated: “What is needed is a systemic, data-driven, comprehensive approach to understanding the quality of two-year and four-year postsecondary education, with direct, valid and reliable measures of student learning.” To meet this need, they proposed a comprehensive system for determining various aspects of higher education learning, with a call for individual institutions to develop their own context-specific outcomes valued at their institution. Although such guidance is limited, it is available—yet such

¹ Examples of sources of outcome data include the National Assessment of Educational Progress (The Nation’s Report Card; nces.ed.gov/nationsreportcard), the annual Digest of Education Statistics (nces.ed.gov/programs/digest), and *The Condition of Education* (nces.ed.gov/programs/coe), all from the National Center for Education Statistics.
guidance has not had a strong presence in the planning processes of higher education institutions.

Conversations about measuring higher education quality are occurring at our home institutions. At the University of Minnesota, internal conversations about learning outcomes have become more prominent in the last few years, where administrators and faculty have been asking: What are the indicators of success for our students? In 2007, the University of Minnesota adopted a set of undergraduate student-learning outcomes and is now engaged with departments across campus in a process of linking program goals to student-learning outcomes and developing assessment plans for measuring relevant student-learning outcomes. Members of St. Catherine University in St. Paul have been engaged in such conversations much longer, through a long-standing assessment committee and a coordinated effort to respond to inquiries regarding assessments and evidence of learning outcomes from accreditation agencies for its licensure and certificate programs. Such questions are gaining importance as legislative bodies around the country face increasing demands for higher education accountability.

Because Minnesota has traditionally achieved high levels of success in educational attainment and related outcomes, it is well positioned to create indicators of higher education outcomes for students, as well as tools to help schools use available data to improve decision making at all levels of education. In addressing student outcomes at all levels, Minnesota can begin to secure the success of all its students and improve the success of the state well into the future.

In our recent work, we have had two goals that built on a common objective: improved decision making by educational leaders and educators, resulting in greater success of all students in Minnesota educational programs. The first goal was to explore and identify the extent to which P–12 school leaders and educators use data to inform their decision making. This work, moving from indicators of student and school success to action steps, creates increased potential for accomplishing our second goal, which was to inform the development of data-driven systems to assess important higher education outcomes. This article describes the results of two studies that we recently completed that addressed these two goals. In the first, we examined how P–12 institutions in Minnesota use data-driven decision making; in the second, we investigated how higher education institutions in Minnesota assess student-learning outcomes. The research upon which this article is based was supported by a grant from CURA’s Faculty Interactive Research Program.

Data-Driven Decision Making in Minnesota P–12 Schools
In our first study, we interviewed P–12 school leaders, educators, and other school staff in Minnesota to investigate how their schools used data-driven decision making (DDDM). DDDM is a process of identifying important goals and relevant evidence and then using that information to improve decision making—simply put, gathering and using information to make good decisions.

**Methodology.** We spoke with 48 educators at 48 different Minnesota schools, 14 in the Twin Cities and 34 in suburban and rural areas. The individuals who participated in interviews were P–12 educators and included 15 general-education teachers; 4 special-education teachers; 2 early-childhood teachers; 2 English-as-a-second-language teachers; 9 principals; 13 counselors, school psychologists, or social workers; 2 assessment coordinators; and 1 superintendent. University of Minnesota graduate students enrolled in an educational measurement and evaluation course met one-on-one with these educators and took notes during their conversations based on a common question: Does your school have a data-driven decision-making process? We asked each educator whether they personally collect or use data formally or informally. If they responded yes, we asked for examples of the kinds of data collected or used, the ways these data were used, and whether and how the use of data has made a difference. If they responded no, we asked if their school or district communicated with school staff about their information needs, the kinds of access to data they have, and to what kinds of information they would like to have access. For those schools with a DDDM process, we explored the process used by the school and were provided with examples of its use. All questions were open-ended with structured follow-ups. In all, 41 of these educators saw themselves as a decision maker and 45 freely used the language of “data-driven decision making” during the interview. In addition, 37 of these educators reported that support or training was available for DDDM in their school or district.

**Results.** In interviews, educators mentioned many reasons for engaging in DDDM (Table 1). Educators primarily engaged in DDDM to meet the needs of individual students and to evaluate if schoolwide goals and improvement had been achieved. These educators also identified more than 50 unique kinds of data that they used to inform decision making (Table 2). Overwhelmingly, they identified assessment results—including state, district, and classroom assessment information—as important to DDDM.
Nonacademic data, including information about student backgrounds and behavior, were mentioned far less often. Through our interviews with educators, we found that, overall, data played an important and often central role in decision making at all levels within a school, but the need for information and the ability to use relevant information appropriately varied widely among educators. Educators expressed a great need for appropriate and meaningful information and reported concerns about the quality and relevance of the information currently available. In some cases, educators reported that the use of data had resulted in significant and important outcomes for their schools, staff, and students (Table 3). The specific outcomes were quite varied, including improved academic and behavioral outcomes, reduced need for special-education interventions, improved communication with parents, and a generally improved process for using data for continuous school improvement efforts. One educator summarized her school’s DDDM efforts this way: “We live and breathe DDDM every day. It drives what we do and when we do it.” However, in other cases, educators reported that gains at their schools had been less apparent.

We found from interviewee responses that the quality of data and data use were most often attributed to the level of training of school leaders, particularly the principal. In some cases, teachers reported to us that they noticed that more new teachers were arriving in school ready to engage in DDDM, and attributed this trend to improved college and university teacher preparation. Interestingly, two principals we interviewed noted that they had participated in DDDM training at the University of Minnesota and are now using data at a noticeably higher rate than neighboring schools. During our conversations, educators and school staff identified several recommendations for improving the use of data in decision-making processes (Table 4). These recommendations largely included the gathering of new kinds of information and the implementation of training to put that information to use.

**Summary.** It is difficult to make generalizations based on interview results that apply across a wide variety of schools, given the unique nature of students, staff, and communities. However, we offer two observations from our study results.

<table>
<thead>
<tr>
<th>Reason</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provides individualized effort and intervention to students</td>
<td>33</td>
</tr>
<tr>
<td>Determines if school goals are being met</td>
<td>30</td>
</tr>
<tr>
<td>Assesses current and future needs—proactive planning</td>
<td>27</td>
</tr>
<tr>
<td>Engages in continuous improvement</td>
<td>19</td>
</tr>
<tr>
<td>Identifies causes of problems</td>
<td>17</td>
</tr>
<tr>
<td>Decides what needs to change</td>
<td>16</td>
</tr>
<tr>
<td>Meets accountability requirements of the No Child Left Behind Act</td>
<td>14</td>
</tr>
<tr>
<td>Aligns instruction (or work) to standards, goals, objectives</td>
<td>13</td>
</tr>
<tr>
<td>Places student or determines eligibility for special services</td>
<td>11</td>
</tr>
</tbody>
</table>

Note: Count is the number of the 48 educator-interviewees who noted this response. Interviewees could cite more than one reason. Other reasons cited included keeping stakeholders and parents informed about student and school progress, addressing issues related to staff professional development, addressing the achievement gap, learning about school climate, monitoring staff performance, supporting teacher planning, and supporting student planning and goal setting.

First, our results indicated that DDDM was already a core element of P–12 school functioning and that staff members were concerned about making the most of the information they have. One common recommendation regarded training and the development of a more structured DDDM process implemented schoolwide or districtwide. In the cases where centralized guidance was high, where the staff participated in data retreats, and where data were a regular part of ongoing discussions and decisions, staff easily identified specific outcomes. The requests for training and professional development were strongest among the teachers who asked for process training—how to gather high-quality information, interpret it meaningfully, and use it appropriately.
Teachers were looking for ways to inform and improve their classroom instruction and how they interact with students and families. Second, our results highlighted the importance of central administrative support and leadership in implementing DDDM. Educators considered the role of the principal pivotal in making DDDM an integral part of the school’s work. If central administration supported DDDM, more staff were included throughout the planning processes in a school. Where that central leadership was not evident, DDDM was not consistently apparent throughout the school, and educators saw limitations in the decision-making activities.

Assessment of Student-Learning Outcomes in Minnesota Higher Education Institutions

In our second study, we used interviews with college and university officials to examine how higher education institutions in Minnesota assess student-learning outcomes, which measure student progress resulting from participation in a program of study (see sidebar on page 10).

Methodology. We interviewed 12 administrators or faculty responsible for the assessment of student-learning outcomes (SLOs) on 12 different campuses around Minnesota: Bethel University, Century College, the College of St. Catherine (now St. Catherine University), Inver Hills Community College, Metropolitan State University, Minnesota State University at Mankato, St. Cloud State University, St. John’s University and College of St. Benedict, St. Mary’s University of Minnesota, St. Olaf College, the University of Minnesota at Morris, and the University of Minnesota at Twin Cities. For breadth, we included private four-year universities (with total student enrollments of approximately 3,500–5,500), public four-year and comprehensive universities (with total student enrollments of approximately 17,000–52,000), and community colleges. We asked each interviewee eight open-ended questions about aspects of the assessment of student-learning outcomes, including the motivation for such assessments, lines of responsibility, the nature and use of the assessments, and whether any observable outcomes have emerged from assessment activities on campus. In each case, administrators were engaged in the discussions and quite forthcoming about the challenges, impacts, and promises of their assessment activities. Each interview was audiotaped, and the interviewer took notes and summarized the conversation immediately following the interview.

<table>
<thead>
<tr>
<th>Table 3. Outcomes Achieved through Data-Driven Decision Making Cited by Minnesota P–12 Educators</th>
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<tbody>
<tr>
<td><strong>Outcomes Reported</strong></td>
</tr>
<tr>
<td>Improved transition times to alleviate issues during passing time</td>
</tr>
<tr>
<td>Instituted periodic data-review meetings</td>
</tr>
<tr>
<td>Uncovered motivation issues from discrepancies between Minnesota Comprehensive Assessments and district assessments</td>
</tr>
<tr>
<td>Improved summaries of great quantities of information through effective graphical displays</td>
</tr>
<tr>
<td>Improved academic and behavioral outcomes</td>
</tr>
<tr>
<td>Eliminated some individualized intervention programs</td>
</tr>
<tr>
<td>Improved identification of students struggling with specific academic content</td>
</tr>
<tr>
<td>Improved school improvement plans with stronger objectives</td>
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<tr>
<td>Reduced special-education referrals and inappropriate referrals</td>
</tr>
<tr>
<td>Improved communication with parents</td>
</tr>
<tr>
<td>Increased graduation rates and number of National Merit Scholars</td>
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<tr>
<td>Increased scores on Advanced Placement exams</td>
</tr>
<tr>
<td>Achieved 100% graduation of English-language learner students</td>
</tr>
<tr>
<td>Identified and implemented effective reading program, targeting the skills needed to improve performance</td>
</tr>
<tr>
<td>Developed study-skills plans for middle-school students</td>
</tr>
<tr>
<td>Received positive parent feedback and response to data presented in informative ways</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 4. Recommendations for Improving School-Based Data-Driven Decision Making Cited by Minnesota P–12 Educators</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Recommendations Cited</strong></td>
</tr>
<tr>
<td>Expand the use of achievement data</td>
</tr>
<tr>
<td>Move data from discussions about school Adequate Yearly Progress (a requirement of the No Child Left Behind Act) to student performance, and focus more attention on those students with the greatest needs</td>
</tr>
<tr>
<td>Provide ongoing training and support to engage in DDDM for all school staff</td>
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<tr>
<td>Implement buildingwide progress-monitoring practices</td>
</tr>
<tr>
<td>Improve reporting time of achievement data collected at the state and district levels</td>
</tr>
<tr>
<td>Improve methods of data presentations for teachers, innovative data displays that make important features of the data meaningful and accessible</td>
</tr>
<tr>
<td>Implement a model of Response to Intervention approach to target interventions to students who need them most</td>
</tr>
<tr>
<td>Develop longitudinal models of student progress on classwork that provide more diagnostic information about strengths and weaknesses</td>
</tr>
<tr>
<td>Gather student-engagement data to address solution strategies</td>
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</table>
Results. From our interviews, we identified the motivations for colleges and universities to assess SLOs, the approaches that their home institutions used for assessing SLOs, how the individual institutions used the evidence gathered from SLO assessment, and how they expected to use the assessment of SLOs over time.

Motivation for Assessing SLOs. Across the interviews, our interviewees mentioned multiple motivations for assessing SLOs. Interviewees described both external and internal motivators (Table 5). External motivators primarily included the need to meet accreditation requirements and, secondarily, to communicate important outcomes to key stakeholders such as alumni, parents, peer institutions, and employers. Internal motivators were more consistent across campuses, largely focusing on the importance of central leadership and a mission-driven focus on improving teaching and learning. We found that, for most institutions, motivation that came from faculty and academic programs seemed to be a powerful force that resulted in effective assessment activities that drove change on campuses.

Methods for Assessing SLOs. The individuals we interviewed reported that the primary responsibility for the assessment of SLOs rested with their faculty, and accordingly their faculty conducted the vast majority of assessments on the campuses we studied. However, interviewees provided a great diversity of responses regarding how the assessment of SLOs was accomplished across the institutions we visited. The methods for assessing learning outcomes were primarily based on one of three models (Table 6). Classroom assessments were the most common assessment method used, but they also provide one of the greatest challenges to institutions with respect to the process required to accumulate such data and aggregate the results in meaningful ways.

Our interviewees reported that the content of those assessments varied as much as the different programs of study did. Officials frequently identified the use of outcomes that assessed critical thinking, writing, global perspectives, problem solving, leadership, communication, civic engagement, ethics, field-specific content knowledge, and in some cases, lifelong learning or special mission-driven outcomes such as faith and spirituality. As we reviewed the SLOs identified by officials across our sample of institutions, we found most institutions had college-, department-, or program-specific SLOs, but few had institution-wide SLOs. Interviewees from public institutions frequently mentioned that a common source of learning outcomes used at their school came from the 10 goals expressed in the Minnesota Transfer Curriculum. However, these curriculum goals were designed to ensure successful transfer of students among Minnesota institutions of higher education through recommended courses (for example, to transfer from a two-year community college to a four-year state university), and do not specify learning outcomes. Similarly, we found from our interviews that the tools employed to measure SLOs varied a great deal across the institutions that our interviewees represented. All the institutions used more than one, and no institution used all, of the instruments found across the campuses we surveyed. Among the instruments used at these institutions were nationally available measures of academic achievement; critical thinking; and student experience.
engagement, and satisfaction. Interviewees reported that many other instruments used at their college or university were developed within the institution, including surveys of campus climate, student engagement, student satisfaction, and others.

**Using Data from SLOs on Campus.**

Our discussions with higher education officials indicated that more work is needed in assessing SLOs and using the data to inform substantive changes for better outcomes. Although our assessment leaders reported common methods for reporting the results of assessment activities, the impact and use of such information was in no way uniform across campuses or within any single campus (Table 7).

Many of the institutions we visited had no campuswide practice for the use of SLO data. In most cases, the use of assessment information depended on the program and faculty leadership at the local level. In a small number of cases, the individuals we interviewed could identify departments, programs, or individual faculty who made extensive use of assessment results and relied on learning-outcome data to do their work (Table 7). However, where the use of assessment results was a prominent activity on a campus and others were aware of it, interviewees reported that in some cases it was not motivating to everyone.

**Expected Uses of SLO Assessments in the Future.** All the higher education officials we interviewed had hopes and expectations for the future of SLO assessment on their campus. Most often, we heard a wish for an institutionalized system to drive change based on evidence (much like DDDM, Table 7). According to our interviewees, some campuses were moving toward the development of campuswide SLOs. One assessment director we interviewed said that he wished his campus faculty and administration would address the question: What should a graduate from our institution know and be able to do? Moreover, some of our interviewees noted that they would like to see every department and program on campus link their curriculum to relevant common SLOs as a means for developing a culture of evidence on campus. To that end, many interviewees also expressed the need to clarify roles in these efforts across campus, from presidents, deans, and department chairs to program coordinators, individual faculty, and others in integral positions found across institutions.

### Table 6. Methods for Assessing Learning Outcomes among Minnesota Institutions of Higher Education

<table>
<thead>
<tr>
<th>Sources of Coordination for Assessment Activities</th>
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<tbody>
<tr>
<td>The office of institutional research (primarily coordinates campuswide surveys and sampling of learning outcomes)</td>
</tr>
<tr>
<td>Faculty governance and a campus assessment committee (primarily coordinates program-level assessment activities)</td>
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<tr>
<td>The director of assessment (not commonly found on all campuses)</td>
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<table>
<thead>
<tr>
<th>Models of Assessing Learning Outcomes</th>
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<tbody>
<tr>
<td>A “value-added” approach, evaluating change among students from first year to final year of studies</td>
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<tr>
<td>Program-specific achievement, summarizing performance in capstone courses (a culminating experience) or major program final projects</td>
</tr>
<tr>
<td>Classroom-specific achievement, summarizing performance in specific core courses within a program or field</td>
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### Table 7. Impact of Measuring Learning Outcomes on Minnesota Campuses

<table>
<thead>
<tr>
<th>Reports of SLOs on campus</th>
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<tbody>
<tr>
<td>Compiled summaries of SLO assessment activities for accreditation reports*</td>
</tr>
<tr>
<td>Made assessment results available to faculty through online resources</td>
</tr>
<tr>
<td>Summarized and reported assessment results directly to faculty and administrators in print format</td>
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<table>
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<tr>
<th>Uses of SLO information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Redesign courses</td>
</tr>
<tr>
<td>Restructure or enhance curriculum and course offerings</td>
</tr>
<tr>
<td>Support grant writing</td>
</tr>
<tr>
<td>Identify new approaches to student services</td>
</tr>
<tr>
<td>Implement new academic and social services</td>
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<table>
<thead>
<tr>
<th>Hopes for future improvements in the use of SLO information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Develop campuswide SLOs</td>
</tr>
<tr>
<td>Identify and train assessment leaders across campus</td>
</tr>
<tr>
<td>Create an environment that appreciates assessment</td>
</tr>
<tr>
<td>Focus on the value of the academic nature of assessment</td>
</tr>
<tr>
<td>Create peer-consulting program to support assessment development and use</td>
</tr>
<tr>
<td>Improve documentation and reporting of the impact of SLO activities</td>
</tr>
<tr>
<td>Disseminate exemplar models of uses of assessment results</td>
</tr>
<tr>
<td>Document improvements in instruction and learning campuswide</td>
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</table>

* Used by every institution in our sample

**Summary.** On each campus we visited, the assessment of learning outcomes was an important endeavor. The motivations for pursuing assessment were many, with the common goal of improving outcomes for students. The articulation of common SLOs has been achieved on
some campuses and was a goal on each of the others. Campus assessment leaders were asking for stronger definitions regarding the roles of various individuals with responsibilities for the assessment of SLOs and stronger leadership on the use of assessment results in decision making throughout campus. The individuals with assessment responsibilities who spoke with us were all looking for ways to build these efforts seamlessly into the regular functions of the institution, to create a culture of assessment, evidence, informed decision making, and continuous improvement.

**Securing the Success of All Minnesota Students: Pre-K through College (and Beyond)**

In completing our studies, we identified many resources to support the DDDM work in P–12 schools and the assessment of student-learning outcomes in higher education, and reviewed a large body of literature on related topics. At the higher education level, the resources available to support the measurement of SLOs are relatively limited. However, what resources are available are useful. The literature is full of case-studies covering forms of assessment and data for school-based decision making, methods of analysis and reporting, and models for effective use of data. In fact, it is these three aspects of DDDM that most authors address: the collection, analysis, and use of data. At the same time, we found that the most common barriers for schools were based on lack of training or expertise to carry out these activities. Even if data were collected and analyzed, personnel in both P–12 schools and institutions of higher education of various sizes reported limited understanding of what to do with the data.

We do not argue that assessment of important student-learning outcomes is a panacea, but rather that it is a necessary part of securing the educational success of all Minnesota students in pre-K through higher education and beyond. We believe that all educators agree that assessment of learning outcomes is an important tool in evaluating and improving efforts as educators, and that informed decision making is superior to uninformed decision making. We also believe that not all assessments or assessment activities are useful, meaningful, or appropriate. In terms of identifying effective assessments, the educational-measurement field has provided a fair amount of guidance through standards for testing and assessment at all levels. However, much of that guidance is inaccessible to untrained individuals, and, particularly at the higher education level, teachers, instructors, and faculty are not equally prepared to undertake the important role of assessment.

**Policy and Practice Implications.**

Many recommendations made directly by our P–12 and higher education interviewees, and many more that resulted from analyses of these discussions, could be used to shape education policy or practice. Clearly, educators at all levels are in need of high-quality data to improve their own performance and the outcomes of their students. However, this general goal has not been fully realized. Educators are motivated by both internal and external factors, but motivation is perhaps mostly enhanced by central leadership. Therefore, school and institutional leaders must step up to support the efforts of their educators. The preparation of school leaders must include strong training in DDDM and assessment in general. Similarly, teacher preparation programs must include aspects of DDDM as a core element of training and practice. Very few teacher preparation programs nationally include a full course on assessment, even though teachers engage in assessment-related activities on a daily basis. This need is no less important in institutions of higher education, where most faculty members have no formal training in instruction, let alone assessment. Campuses must provide ongoing support to faculty regarding assessment and opportunities for improving their instructional practice. In addition, an incentive structure must be in place in formal performance reviews to recognize efforts to improve instruction and assessment practice.

The nation and the state of Minnesota place a high degree of importance on educational outcomes at all levels. Unfortunately, the level of training, support, and recognition for exemplary practice in the areas of instruction and assessment are not commensurate given the high level of expectations. One simple way to begin to bridge the divide between expectations and practice is to provide opportunities to share models of practice, as well as opportunities for ongoing training and support. The Minnesota Department of Education and Office of Higher Education could provide additional leadership by gathering case-studies of exemplary practices and outcomes and making them available to others online. Throughout our interviews, educators frequently requested access to resources to support their work, and virtually all were interested in the outcomes of this research project.

**Conclusions.**

Many aspects of our educational systems require attention and improvement. We argue that the most efficient way to approach such large-scale improvement is through informed decision making with high-quality data, including assessment results, that address important learning outcomes. Where these efforts have been undertaken with central leadership; coordination and support; resources and training; and public dissemination, review, and participation, the results have been impressive. At all levels of education, Minnesota continues to be a national leader. However, in these times of constrained resources and demands for greater accountability, we need to act decisively and fully participate as educators preparing future Minnesota citizens. Data-driven decision making and the assessment of student-learning outcomes are not just current buzzwords, but rather are important means to progress and to secure the success of all Minnesota students.
Compared with P–12 schools, fewer resources regarding the collection of evidence of important outcomes are available for higher education institutions. Student academic performance at all levels took center stage in 1983 with the National Commission on Excellence in Education’s release of A Nation at Risk, a foreboding report that uncovered high rates of illiteracy and lower overall academic performance at a time when the demand for highly skilled workers was increasing rapidly. As a result, attention to the role of higher education in the nation’s progress in the world increased. College and university accreditation agencies began to require institutions to include student-learning goals and assessment plans to gather evidence of student academic achievement as part of the accreditation process. In 2005, U.S. Secretary of Education Margaret Spellings commissioned a study of the future of higher education and called for institutions to be more affordable, accessible, and accountable. In 2007, the Commission on the Future of Higher Education produced the report A Test of Leadership: Charting the Future of U.S. Higher Education. Since the release of this report, higher education media have pursued its implications with compelling and alarming headlines, such as “The feds are coming! The feds are coming!” “No college left behind,” “No graduate left behind,” and “A worldwide test for higher education?”

The current national discussion focuses on the “value added” by participation in a particular institution or program of study by assessing if students learned as a result of their enrollment in the institution. Educators are also debating what learning outcomes, which measure student progress resulting from participation in a program of study, are imperative in today’s world. A consensus is emerging through a series of reports by the nation’s higher education accreditation agencies, the American Association of Colleges and Universities (AACU), and other higher education associations that a few learning outcomes are key regardless of major or area of study (including knowledge of human culture and the natural world, intellectual and practical skills, and individual and social responsibility).¹


The Council of Higher Education Accreditation and AACU released an authoritative response to the Commission on the Future of Higher Education report in their statement New Leadership for Student Learning and Accountability. They proposed six principles of meaningful educational accountability:

- The primary responsibility for achieving excellence falls on colleges and universities themselves.
- Each college and university should develop ambitious, specific, and clearly stated goals for student learning appropriate to its mission, resources, tradition, student body, and community setting.
- Each college and university should gather evidence about how well students in various programs are achieving learning goals across the curriculum and about the ability of its graduates to succeed in a challenging and rapidly changing world.
- Each college and university should provide information about its basic characteristics, clearly communicate its educational mission, and describe its strategies for achieving its educational goals and their effectiveness.
- Understanding that the federal government has a responsibility to see that its funds are properly used, we recognize the importance of its careful monitoring of expenditures of its funds and its reliance on independent accrediting organizations to encourage systematic improvement of educational results.
- As educational associations, we are committed to high standards for our institutions of higher education and their students.

The terms “standardized assessments” and “universal learning outcomes” are absent from this position statement. Many have suggested that the Commission on the Future of Higher Education report calls for common learning outcomes and common measures across institutions, but as we spoke with administrators and faculty at Minnesota colleges and universities, we found that learning outcomes are local and result from the unique mission and values of each institution.

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In the summer of 1999, I received a call from Sally Auger, who identified herself as an urban American Indian woman living in the Twin Cities. She wanted to talk with me about a gardening project aimed at bringing back some of the heirloom foods cultivated by American Indian people for centuries, including corn, beans, and squash. These foods, she explained, were being grown from seeds kept by American Indians all those years.

At the time of Sally’s call, my academic work as a faculty member in the Department of Food Science and Nutrition at the University of Minnesota was both shifting and expanding. I was attempting to include the voice of communities holding knowledge of food and health that lie beyond the academic models that I had learned as a nutrition scientist. This was a challenge, because being properly “scientific” meant studying the world in certain ways—through control, prediction, and formal theory or experiment. Although I was conditioned to recognize as legitimate only the academic sciences learned formally, I was beginning to understand and appreciate that American Indian people have always had their own forms of science.1 “Native science” has brought forth sophisticated systems of agriculture that have given us beans, corn, potatoes, pumpkins, squash, tomatoes, and more than 20 other foods that we commonly use today.2 Of the more than 30,000 types of vascular plants found in North America, American Indians have used 2,874 as medicines; 1,886 as foods; 492 as fibers for weaving, baskets, or building materials; and 230 as dyes. All told, they have found a useful purpose for nearly 4,000 types of plants.3 These contributions were seldom, if ever, acknowledged during my training in food and nutrition science. Such knowledge must come from more than simple trial and error, I thought, but I had not yet been able

1 G. Cajete, Native Science. Natural Laws of Interdependence (Santa Fe, NM: Clear Light, 2000).
2 E.D. Keoke and K.M. Porterfield, American Indian Contributions to the World: 15,000 Years of Inventions and Innovations (New York, NY: Checkmark, 2002).
to wrap my head around the larger implications of very different knowledge systems that lie beyond the academic world.

My Introduction to Dream of Wild Health

During our initial phone call, Sally invited me to meet her and visit at her modest home in central St. Paul to learn more about the seed-gardening project known as Dream of Wild Health (sidebar). When I arrived, Sally greeted me warmly and invited me in for tea. Little did I know at the time that this would be the first of many tea visits that continue to this day. Sally described herself as coming from the Abenaki community that sits on either side of the New Hampshire–Canadian border in upper New England. Her husband, John, was from the Odawa community in Michigan. Sally told me that the seed-garden project had started in earnest when Cora Baker, an elderly Potawatomi woman from the Wisconsin Dells area, gifted her lifelong seed collection to Dream of Wild Health in March 2000. Cora was a Keeper of the Seeds, who wrote to Sally:

I was delighted to learn that you were starting a real Indian Garden. I had thought some 35 years ago that someone would be interested in our gardens. I had prayed and prayed that someone would take up gardening again. I am very pleased to learn about your project. I feel that the Great Creator has answered my humble prayers.

Cora died at age 94, not long after she put these words on paper. Her heirloom seed collection included many different varieties of the Three Sisters—corn, beans and squash—along with several sunflower varieties, several varieties of indigenous tobaccos, and many different plant medicines. Sally told me that she and John were the recipient of a beautiful and valuable gift, but that with this gift came significant responsibility and obligation. As an American Indian person, Sally did not consider herself to have any say in whether or not to keep the seeds or honor this particular responsibility. Cora chose Dream of Wild Health for this responsibility (passing on), and it was Sally’s honor, duty, and obligation to keep, protect, and share Cora’s gift of seeds. Sally could not simply walk away—she now had a responsibility not only to Cora, but to the American Indian community and to the seeds themselves.

According to Sally, other gifts of seeds soon came from across the country. Each gift had its own story to tell:

- 100-year-old Arikara corn from North Dakota that arrived wrapped in tissue paper with a note explaining that,
“Grandma had been saving these seeds for years. Now that she has passed, she wants you to take care of them.”

- Two varieties of Ojibwe corn that came from Red Lake, Minnesota, with a note apologizing that the two types may have been crossed, because the old farmer “mixed the seeds up.”
- Corn seeds carried on the Trail of Tears, a more than 1,000-mile journey that resulted from the forced removal in 1838 of some 100,000 members of the Cherokee, Choctaw, Chickasaw, Creek, and Seminole nations from the eastern United States to what is now Oklahoma.

At the time of my meeting with Sally, Dream of Wild Health found itself in possession of a rare collection of more than 200 indigenous heirloom seeds gifted by elders, reservations, and seed-savers. Sally explained that the project was not only responsible for the protection of the physical seeds, but also accepted the responsibility to recover and preserve the traditional American Indian relationships between plants and people. She described a worldview in which all “things” natural, including soil, water, plants and seeds, animals, and even rocks, are animate and have spirit. She spoke of the seeds as conscious beings, holding the gift of life and reflecting American Indian people’s spiritual and aesthetic identity. According to Sally, within the seeds is a spiritual connection with the ancestors who grew and nurtured the plants, and this spiritual connection requires that we as humans must approach any action or intervention in the natural world with great care, much consideration, and “good intentions,” sanctioned through appropriate ceremony.

At the time, these ideas lay well beyond anything I recognized as “scientific.” My thinking as a professional was oriented toward physiochemical dimensions of the material world. Yet Sally’s soft-spoken sincerity and conviction were quite compelling. In addition, I found in her words a sense of powerful consciousness, wisdom, and compassion that somehow seemed timeless. Her words influenced me in a way I had not experienced in my professional relationships on campus. Although I could not have known it then, that initial meeting in 1999 led to a long-standing partnership between Dream of Wild Health and the University of Minnesota that continues today. As I reflect back on the past 11 years, my relationship to Dream of Wild Health went beyond intellectual or cognitive dimensions; it also engaged my heart and soul in a spiritual connection.

**Bridging Academic and Cultural Communities**

As an extension nutritionist at the University of Minnesota, I have responsibilities to serve the citizens of Minnesota. This mission is often translated into “delivering content,” providing evidence-based programs, conducting teaching/outreach, and pursuing research opportunities. The relationship between “expert” and “audience” is often characterized in terms of “service” to a “customer,” “client,” or “citizen.” Whereas this kind of work has its place, my experience with Dream of Wild Health, as well as other American Indian or marginalized communities, suggests that a higher priority is placed on building a meaningful relationship prior to any “content” work. Building such a relationship requires honest and forthright expression of who I am and where I come from, bringing my fullest self as a human being. This process does not occur in many professional settings, where maintaining one’s image, credibility, and professional reputation are major factors driving the action, agenda, and decisions of academic professionals. I found myself attempting to bridge an institutional world of control and self-protection with a community world of mythos and spirituality.

I believe this distinction to be of paramount importance in the quality of interaction between academic professionals and cultural communities. Many American Indian communities have had quite negative experiences with even well-intentioned academic research that is grounded within a Eurocentric worldview and presumed to have universal application. In my own experience, I was taught, as many researchers are, to proceed by imposing programs and methodologies seen as internally valid by professional peers, without sufficient sensitivity to or regard for their fit within diverse community and cultural settings. All research methods carry implicit background assumptions and presuppositions that may become a source of conflict when put into the context of American Indian worldviews. Training in many scientific disciplines still can lead members to hold so tightly to Western/scientific models that little room is available for open-minded consideration of the experiential, subjective, spiritual, and ancestral knowledge within American Indian communities. On campus, academic research is viewed as a public good. On the streets of many American Indian communities, the word research “stirs up silence, conjures up bad memories, it raises a smile that is knowing and distorting.” As some American Indian people have said, “we have been researched to death.” Even well-intentioned attempts to be more culturally sensitive can fail to comprehend the cultural damage that can be inflicted when a community’s knowledge assets are discounted or disregarded.

In the case of the Dream of Wild Health seed-collection project, Sally stated very directly that she could not allow the project to lose control of the seeds. She feared that some university researchers might want to exploit the seeds to benefit their own research agenda, which could be inconsistent with American Indian cultural values. In this context, to be helpful to Dream of Wild Health, I would need to be more than a content expert in nutrition science; I felt an obligation to assume a kind of gatekeeper responsibility that would help to protect the seeds from unwanted use or unintended consequences. I would need to learn about American Indian culture, but also to learn about myself to have enough integrity in where I stood that I might help to minimize the possibilities for

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unintended or subconscious violation of trust.

In this way, my interaction with the Dream of Wild Health project in the subsequent 11 years involved a continuous process of learning. This kind of work represented a shift in professional role from a content expert consultant to being an acolyte or co-learner mentored by Dream of Wild Health. It required my sincere commitment to the mission and goals of the project, while also causing me to examine some of my own professional impulses. As my learning progressed, I recognized the importance of being willing to engage in a process of self-examination. My experience of navigating cultural difference included a metaphorical mirror that greatly facilitated this work. What assumptions do I bring to the table about how the world works? What are my motives? Who benefits from the work? Rather than simply presuming biomedical science to represent the final voice of authority, I had to make room for American Indian epistemologies that go beyond the material world. I had to be willing to go back and study the history and philosophy of the science I learned, as these aspects were not required in my formal training. I had to be willing to navigate the deeper dimensions of cultural difference and to develop an interaction that respectfully bridges different cultural worldviews. This process of cross-cultural engagement could then allow for mutual learning and benefit where university knowledge and expertise might then complement, not replace, the indigenous knowledge that serves as a foundation for the Dream of Wild Health programs. Maintaining this balance requires yielding power and control for a mentoring and learning relationship.

The Growth of Dream of Wild Health

Over the years, the Dream of Wild Health partnership has expanded to include the University of Minnesota’s Center for Urban and Regional Affairs, Department of Food Science and Nutrition, Department of Horticulture Science, and Extension. Each of these units has provided expertise, student volunteers, and interns who assist with researching and documenting seeds, working directly in the greenhouse and gardens, utilizing agro-ecology throughout the farm, and working with young American Indian people to learn about good nutrition, cooking, and shopping skills. Each individual who has worked with Dream of Wild Health had to bring “a good heart,” which includes a sincerity and openness that allows for the kind of self-examination described above, to the relationship. Through the years, a number of Dream of Wild Health student projects have been supported through CURA’s Community Assistantship Program and Communi-

University program (see sidebar). Dream of Wild Health began and remains a community-based program committed to reconnecting urban American Indian people to their land and their gardening traditions. From 1999 until 2003, Dream of Wild Health leased a half-acre parcel of land in Farmington, Minnesota. Dream of Wild Health established several gardens on this land, including:

- a diabetes-prevention garden for American Indian youth
- a women’s medicine garden
- a sacred tobacco garden
- a seed-stock propagation garden
- a Three Sisters garden

Unfortunately, the gardens at the Farmington site were at risk of contamination from nearby fields growing genetically modified crops; without control of the land, insufficient room existed to safely grow heirloom seeds or expand community programming. A strategic planning process led to the search for a permanent farm. In October 2004, a program-related investment from the Otto Bremer Foundation secured the rights to a 10-acre organic farm in Hugo,

### CURA and the Dream of Wild Health Projects

Beginning in 1996, CURA has supported eight projects with Dream of Wild Health, generally by providing a research assistant to complete applied research on a community-defined project. These projects include the following:

- A graduate student in archaeology conducted a literature review of American Indian plant varieties and completed a database of indigenous plants that was initiated by Dream of Wild Health.
- An undergraduate student in natural resources assisted Dream of Wild Health with its annual plant research by propagating, growing, and harvesting plants in its 150 plant collections.
- A student from Minneapolis Community and Technical College researched and documented the pollination, germination, propagation, and harvest of heirloom plants and seeds in the Dream of Wild Health collection that are edible or have sacred medicinal uses.
- A graduate student in public health assessed the impact of “In Cora’s Garden,” a Dream of Wild Health summer program for elementary school-aged children intended to improve diet and exercise choices among urban American Indian youth using a combination of Western-scientific and indigenous concepts of nutrition and physical, emotional, and spiritual health.
- A graduate student and a professor in horticultural science successfully propagated several varieties of near-extinct indigenous corn in the collection of the Dream of Wild Health, securing these varieties for future generations.
- A graduate student in nutrition developed recipes using indigenous bean varieties grown by Dream of Wild Health, which have particularly high levels of antioxidants, and used the recipes to educate urban American Indian communities about reclaiming indigenous foods as an avenue to improved health and wellness.

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Minnesota, just north of the Twin Cities. Today, the Dream of Wild Health farm in Hugo remains as a location for the Twin Cities urban American Indian community to teach and share learning about reinvigorating indigenous agriculture.

A strategic planning session in 2007 articulated the four holistic goals that continue to guide Dream of Wild Health:

- We honor the seeds as our ancestors by protecting, growing, and sharing them in a good way;
- We restore an indigenous relationship with the land by reciprocating the gifts we are given with what we give back;
- We promote healing relationships with people, food, and culture;
- This work carries through seven generations.

During the past six years, the work of Dream of Wild Health has included:

- Expanding community knowledge of the value, history, and potential of indigenous foods by reaching approximately 1,000 American Indian and non-Native people in educational workshops, presentations, classrooms, and hands-on garden activities.
- Writing and piloting a new health-promotion curriculum and companion book for American Indian youth titled *In Cora’s Garden*, which features the voice of seed-saver Cora Baker teaching her great-great granddaughter Liz diabetes prevention.
- Demonstrating the high level of nutritional value in many of the corn, bean, and squash in the collection. Two sets of tests, conducted through a win-win partnership with the University of Minnesota and a subsidiary of General Mills, have indicated that Potawatomi beans gifted by Cora Baker have more antioxidant activity than store-bought beans.
- Providing seeds and/or technical assistance to a wide variety of reservation-based communities across the Upper Midwest and Canada—from the Bad River Ojibwe Reservation in Wisconsin to the Sioux Community in Morton, Minnesota.

As reflected in the goal of carrying the seeds through the generations, the well-being of children and future generations is very important to the work of Dream of Wild Health. As the leaders of tomorrow, American Indian young people must learn and pass on the importance of healthy life ways to keep their community strong and vibrant. In this vein, the youth-education programs of Dream of Wild Health are a significant success story. Each summer, 30 children ages 8–18 travel daily more than 25 miles from the inner city to the Hugo farm, where they spend four days per week over a month. They learn about their cultural traditions, including their ancestral relations to the land, the plants, and all that is. They engage in art, science, gardening, preparing and eating meals, and recreation. They learn about American Indian agriculture, agro-ecology and permaculture, greenhouse growing, health, nutrition, diabetes and obesity prevention, project and financial management, advocacy, and leadership. The Dream of Wild Health staff, horticultural and permaculture experts, community members, cultural leaders, and county extension nutritionists lead the programs’ hands-on activities and experiential learning. The youth each earn a stipend, open and manage a bank account with the stipend, harvest crops, and sell the harvest at a farmers’ market in their community. They teach their parents about the “Indian foods” they grew and prepared.8 They learn leadership skills and are recognized by their family and friends at a harvest celebration every August.

### Conclusion

The partnership work of cross-cultural bridging and interaction is essential to improving the health of indigenous people in low-income, urban communities. Although many academic researchers are still not sensitive enough to the spiritual realities of indigenous culture, many in American Indian communities do not trust academic researchers or do not see their methods as offering viable solutions that will benefit people on the streets. Dream of Wild Health has become a leader in learning how to navigate and negotiate these different cultural worlds, situating academic knowledge from permaculture, horticulture, farming, nutrition, and food safety alongside indigenous cultural wisdom that guides the traditional American Indian relationships between plants and people. Together with the University of Minnesota and with support from the Center for Urban and Regional Affairs, Dream of Wild Health has built a partnership that could well be a model for connecting research universities with cultural communities for mutual benefit.

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U.S. Immigration and Customs Enforcement, also known as ICE, is the largest branch of the U.S. Department of Homeland Security. The ICE mission “is to protect national security by enforcing our nation’s customs and immigration laws,” and its stated priorities include human trafficking and smuggling, violent transnational gangs, and sexual predators. In actuality, a substantial portion of its $5.5 billion budget and 17,000-person workforce is dedicated to arresting and detaining undocumented immigrants, many of whom lawfully entered the U.S. According to the Department of Homeland Security, approximately 11 million undocumented immigrants live in the United States today. According to the Detention Watch Network, more than 440,000 of these individuals were in detention in 2009. During the past five years, the kinds of immigration enforcement actions that lead to arrests and detentions have dramatically increased.

Undocumented immigrants, as well as some lawful permanent residents, end up in civil immigration detention through various channels that include seeking asylum in the United States, arrest at worksite raids or in homes, random stops for civil violations (such as a burned-out tail light), and arrests or convictions for crimes. Latino-rights and human-rights groups have expressed concerns about how immigration detention has expanded. The immigration director of the National Council of La Raza has stated, “We understand the need for sensible enforcement, but that does not mean expanding programs that have often led to civil rights violations.” In fact, immigration experts have described the immigration detention system as “the worst of all worlds.”

Despite this, in August 2009 Janet Napolitano, the U.S. Secretary of Homeland Security, stated that she “expects

1 For more information about U.S. ICE, visit www.ice.gov/about/index.htm.

2 Article 14 of The Universal Declaration of Human Rights states: “Everyone has the right to seek and to enjoy in other countries asylum from persecution.” It defines asylum as “shelter from danger ... a person might feel danger in times of war but also when threatened by intolerant governments. In such cases, a person might choose to leave their country and seek asylum, or become a refugee, in another country.” UN General Assembly, The Universal Declaration of Human Rights, 1948.

the number of detainees to stay the
same or grow slightly."4

The study that we present here is
one of the first to systematically inter-
view attorneys to get their reports of
violations of the rights of detained
immigrant clients. This perspective is
important because immigrants them-
selves rarely understand the detention
process or know their rights; thus,
attorneys are an important source of
information on the process and how
it impacts the rights of their clients.

We interviewed 31 attorneys to learn
about their experiences communicating
with their undocumented immigrant
clients, and reports of the immigrants’
treatment during incarceration. The
attorneys described serious violations of
a number of federal standards for deten-
tion. Our research was supported in
part through a grant from CURA’s New
Initiatives program.

Background
Regardless of their legal status, detained
immigrants have certain basic rights
in the United States. These rights stem
from both the U.S. Constitution and
local and federal laws. Constitutional
rights include a right to due process
(Fifth Amendment), a right to equal
protection under the law (Fourteenth
Amendment), and protection from
cruel and unusual punishment (Eighth
Amendment). Immigrants also have a
right to counsel, but the scope of that
Sixth Amendment right is in conten-
tion. A central issue within immigrant
detention is what standards govern the
treatment of detained immigrants to
ensure that their rights are not violated.

The federal government has national
guidelines that “intend to set a standard
of consistent care and fair treatment for
detainees in immigration custody.” First
created in 2000, these standards were
updated and renamed “detention stan-
ards” in 2008.5 Forty-two detailed stan-
dards outline specific protocols related
to issues such as dietary needs, medical
access, telephone use, and visiting
hours. However, the ICE detention stan-
dards are not codified and have no force
of law. The lack of binding guidelines
restricts the agency’s accountability in
protecting immigrant detainees’ rights.

In Minnesota, immigrants detained
by ICE are held in one of five facilities
that are operated or subcontracted by
the Department of Homeland Security.
ICE subcontracts with county jails in
Carver, Freeborn, Nobles, Ramsey, and
Sherburne counties to house long-term
immigration detainees (Figure 1). Each
of these jails varies in its treatment of
immigrant detainees. In addition, ICE
operates a facility in Bloomington that
is used primarily for processing and
immigration court hearings.

Methodology
Our study focused on two groups of
lawyers who represent immigrants
in detention: immigration attorneys
who provide private, nonprofit, or pro
bono immigration services, and public
defenders who are appointed to repre-
sent indigent immigrants detained for
criminal violations. When these two
groups were combined, we identified
approximately 585 attorneys who repre-
sented detained clients in Minnesota
between 2007 and 2009. To identify
attorneys who practiced immigra-
tion law, we contacted large nonprofit
agencies providing legal services to
immigrants and also sent e-mails to
approximately 200 members of the
Minnesota/Dakota chapter of the Amer-
ican Immigration Lawyers Association,
describing the project and conveying
our interest in interviewing attorneys
who had represented immigrants in
detention at some point during the past
two years. To identify public defenders
who had represented immigrants within
the past two years, we contacted coun-
ties with immigrant detention centers
(the subcontracted jails as described
above) and areas with the highest immi-
gerant populations: Ramsey, Nobles,
Carver, Sherburne, Rice, and Kandiyohi
counties. In each county, the Chief
Public Defender identified the public
defenders who had represented the most
immigrants in the past two years. In
the state of Minnesota, we identified an
initial list of 40 potential respondents,
whom we then contacted by phone. Of
these, 31 (78%) agreed to participate.

Figure 1. ICE Detention Facilities in Minnesota

1. ICE Office, Bloomington
2. Carver County Jail, Chaska
3. Freeborn County Jail, Albert Lea
4. Nobles County Jail, Worthington
5. Ramsey County Jail, St. Paul
6. Sherburne County Jail, Elk River

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4 N. Bernstein, “U.S. to Reform Policy on Detention

5 U.S. Immigration and Customs Enforcement,
ICE Performance Based National Detention Standards
(Washington, DC: U.S. Immigration and Customs
Enforcement, 2008).
in an in-depth, face-to-face interview (see Table 1) in their offices. These were structured interviews of about 50 questions, with a few open-ended questions. Interviews lasted between 50 and 75 minutes. The tape-recorded interviews were then transcribed and labeled anonymously before being coded and analyzed using NVivo software.

Study Results and Discussion

In this section, we summarize the reports of attorneys regarding the characteristics of their detained clients and the detention conditions that impact clients’ rights.

Characteristics of Clients. The federal government’s policy of collaborating with state and local officials to identify and detain undocumented immigrants has substantially increased the total number of immigrants detained in Minnesota. On any given day, between 200 and 300 persons are in immigration detention in the state.6

Some individuals are wrongly detained. ICE does not have the right to detain U.S. citizens, but 38% of the immigration lawyers in our study reported that, in the past two years, they had represented at least one U.S. citizen who was in immigration detention.7 Some attorneys reported that they had clients who were detained even when credible claims to U.S. citizenship had been made, and one described a case in which a U.S. citizen agreed to be deported in order to get out of detention.

In addition to cases of U.S. citizens, both public defenders and immigration lawyers had represented immigrants who were in the country legally (i.e., with some form of legal immigration status). Of all the detained immigrant clients represented by attorneys in our study, just under one-third (29%) were lawful permanent residents. The vast majority of these detained immigrants (91%) had been in the United States for more than a year, and almost two-thirds (66%) had been in the United States for more than five years (Figure 2). Many detainees had family members who were either U.S. citizens or lawful permanent residents. More than two-thirds of the attorneys we interviewed (68%) reported that their clients had “a few” family members who were U.S. citizens or lawful permanent residents, 13% reported “many,” and 19% reported “all.”

In the current system, an immigrant can be swallowed up by an opaque detention system without being able to contact attorneys, family, or friends.8 The lawyers who participated in our study reported that it takes, on average, six days before they are able to make initial contact with their detained clients. Without the ability to make this contact, the majority of immigrant detainees are deported without ever seeing a lawyer. The fact that few of the clients had been in the United States for less than a year may be due to the quick deportation of many immigrants who do not have access to counsel and/or the preference of attorneys to take stronger cases. Furthermore, one attorney told of detained immigrants who reported being pressured into agreeing to deportation, rather than exercising their right to appear before an immigration judge and pursue relief that would enable them to lawfully remain in the United States.

Right to Counsel and Barriers to Representation. The right to counsel is significantly different in civil immigration cases and criminal cases. Public defenders are appointed to represent detained indigent immigrants who

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7 Most of these cases involved individuals who were unaware that they “derived” citizenship as a result of having parents who were naturalized.

8 Human Rights Watch, “Families Separated and Immigrants Harmed by United States Deportation Policy,” Forced Apart (By the Numbers) 19,3 (July 2007): 1–86.
are charged with criminal violations, whereas attorneys providing civil immigration law services must be retained and paid by the detainees themselves. Ironically, immigrants who are charged with committing crimes are thus guaranteed counsel, whereas immigrants detained for civil infractions of immigration law may never get to see a lawyer.

The attorneys we interviewed identified numerous barriers to providing representation to their immigrant clients. Some of those barriers, especially those pertaining to communication, were commonly experienced by both public defenders and immigration attorneys. All attorneys reported barriers to communication that stymied representation. Furthermore, all attorneys reported spending time on issues such as family concerns, untreated medical conditions, and fears of abuse that were unrelated to the direct purpose of representation. However, other barriers were unique to the type of representation provided. Public defenders were hampered in their representation by enormous caseloads, a lack of expertise in immigration law, and immigrants’ reluctance to go to court out of fear of the negative consequences of conviction. Immigration attorneys were overwhelmed by the sheer number of detained immigrants seeking legal services, many of whom lacked resources to pay or were perceived as ineligible for relief under immigration laws.

Public Defenders and Barriers to the Representation of Detained Immigrants. During the past 12 years, the immigration consequences of criminal activity have continually grown more serious. Currently, the list of crimes that can result in deportation from the United States ranges from relatively minor crimes, such as shoplifting, to more serious offenses. The fact that a criminal conviction can make an immigrant deportable creates problems for public defenders representing immigrants charged with a criminal violation. Indeed, every one of the public defenders we interviewed said that the immigration status of their clients complicated their roles in providing criminal defense. One public defender explained the difficulty as follows:

On the one hand … the immigration matter should not affect the criminal case, and, from an intellectual purity standpoint, that makes a lot of sense. But [for the client], that makes no sense at all. It’s part of their circumstances, just as much as if my client has chemical dependency issues. I have to be aware of that, and I need to give advice based upon what their circumstances are.

Another public defender pointed out that the lingering question when providing counsel to an immigrant is:

If my client pleads to this, is this going to be a problem with immigration?

Answering this question requires that the public defenders have resources to consult an immigration attorney, or time to research the immigration consequences of a plea—luxuries that they rarely have. The public defense system is overwhelmed with cases. One public defender we interviewed stated that attorneys are handling twice the caseloads that would be permitted by the standards of the American Bar Association.

Immigration law is complex, and pleas in a criminal case can have a direct impact on the outcomes of an immigration case, yet less than one-third of the public defenders in our study reported consulting with immigration attorneys. Another issue is that ICE detention often impedes case resolution by regularly placing holds on immigrants facing criminal charges that prohibit their release from detention. As one public defender put it, detention “creates barriers to the process of negotiation.” Such barriers are widespread throughout the criminal process. Almost three-fourths of the public defenders (70%) we interviewed reported representing an immigrant who failed to appear at a hearing because he or she was being held in ICE detention. One noted:

Oddly enough, sometimes people disappear and they are suddenly up in the Elk River [Detention Facility]. And I’m not told this and I may have gone through the hoops of making all the arrangements, and then they’re not here. It adds a whole other layer of complexity.

The immigration consequences of criminal activity coupled with ICE detention policies significantly hamper the work of public defenders. The “criminalization” of civil immigration law is burdening an already strained public defense system. According to the American Bar Association (ABA), only 16% of detained immigrants are represented in immigration court. The sheer volume of detainees presents its own barrier; immigration attorneys (both nonprofit pro bono and private) report a large disparity between requests for representation and their ability to accept cases (see Figure 3). In the past two years, on average, private attorneys were only able to represent 20% of the detained immigrants seeking their services. Pro bono lawyers working with the Immigration Court Detention Project were able to provide limited services to a higher percentage of detainees, but most of this consisted of very brief consultations prior to immigration court hearings to provide information and limited representation in lieu of full representation.

In addition to the volume of cases, other barriers to representation exist. Of the attorneys we interviewed, 86% reported that a detained immigrant’s lack of relief—that is, inability to win the case because of the provisions of current immigration law—was sufficient reason to decline representation. Another significant barrier is the detainee’s ability to pay for counsel (see Figure 4). The attorneys we interviewed indicated that cost was a significant barrier to representation, as detained immigrants often have limited incomes or access to resources. All of these issues are interconnected with an immigrant’s detention. The ability of attorneys to accept detained clients depends on the amount of time and resources available to them, which is, in turn, limited by the time they must spend on non-legal activities, such as driving to a detention facility. Attorneys in our study estimated that they spent at least half of their case-related time traveling to detention facilities, collecting necessary documents, and dealing with

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detainee family issues. These burdens are serious impediments to representation.

The high bond set for immigrants in detention is a separate but equally serious issue. Despite the fact that most immigrant detainees have very limited financial resources, ICE and immigration judges frequently set much higher bonds than the minimum $1,500. According to one attorney:

Bonds have just skyrocketed in the past several years, both from ICE, as well as the amounts of bonds that immigration judges set at bond hearings. It’s not been unheard of for an immigration judge to actually increase the bond amount, even in a bond reduction hearing. It’s not atypical for us to see a $10,000 minimum bond amount.

**Barriers to Communication.** This section summarizes our findings related to barriers that attorneys experienced in communicating with their clients.

**Barriers to Private, Confidential Meetings.** Impediments to private, confidential meetings violate attorney-client privilege and significantly limit an attorney’s ability to gather critical case information. The ICE standard for visits by legal representatives and legal assistants states that:

In visits referred to as “legal visitation,” each detainee may meet privately with current or prospective legal representatives and their legal assistants…. Visits between legal representatives and assistants and an individual detainee are confidential and shall not be subject to auditory

![Figure 3. Attorney Responses about the Number of Requests for Representation They Received and the Number of Cases Represented in the Past Two Years, by Type of Practice](image)

![Figure 4. Number of Attorneys Who Cited Specific Reasons for Not Accepting Civil Immigration Cases](image)

<table>
<thead>
<tr>
<th>Reason</th>
<th>Number of Attorneys Citing Reason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ability to pay</td>
<td>15</td>
</tr>
<tr>
<td>Language barriers</td>
<td>9</td>
</tr>
<tr>
<td>Difficulty visiting jail</td>
<td>15</td>
</tr>
<tr>
<td>Difficult phone access to/from client</td>
<td>12</td>
</tr>
<tr>
<td>Time constraints</td>
<td>19</td>
</tr>
<tr>
<td>Cases too complex</td>
<td>4</td>
</tr>
<tr>
<td>Lack of relief</td>
<td>18</td>
</tr>
</tbody>
</table>

Note: Number of private, pro bono attorneys interviewed (n) = 21. Attorneys could cite more than one reason.
supervision. Private consultation rooms shall be available for such meetings.

Despite this standard, 100% of the immigration attorneys and 60% of the public defenders that we interviewed said that they had encountered barriers to private confidential meetings with their detained clients. By far the greatest barriers to confidential communication were reported at the central ICE facility in Bloomington, where the physical space made it impossible to hold private meetings. One immigration attorney described the Bloomington facility as follows:

It’s a small, tiny room, it has a glass wall, two seats and two phones. The phone sometimes doesn’t work or there is an echo on it, so then there are two attorneys seated side by side, and then the area for the detainees has two people. You can hear each other’s conversations, you have to talk loud, and the people in the waiting room, [although] there is a door to close, can still hear.

Attorneys we interviewed also reported breaches of confidentiality in other facilities, such as the following example:

In Ramsey County there is a button or a switch on the wall behind you, and if you don’t notice it and know that you need to switch it, then your conversation is being listened to. So it’s not confidential, and who knows even if you switch that button, if the conversation is private.

Authorities at some facilities refused to grant attorneys personal meetings with their clients, and only permitted video conferencing. Further impinging upon attorney-client meetings is the distance that attorneys need to travel to meet some detained clients. Because most immigration attorneys are located in the Twin Cities metropolitan area (Table 1), they have to drive distances of up to 200 miles to visit clients in some of the county jails used as immigration detention facilities.

**Barriers to Telephone Communication.** ICE standards stipulate that direct phone calls to legal representatives shall be permitted, at no cost to the detainee, that free and direct calls must be easily accessible, and that calls to obtain counsel shall not be restricted. Calls to other parties are at the detainee’s expense, but should be made available with a reasonably priced phone card. These standards were routinely violated in Minnesota. A majority of attorneys reported phone restrictions that negatively impacted their abilities to represent detained immigrants. These ranged from lack of funds for phone calls to arbitrary time limits (see Figure 5). According to one attorney, “most people have to call collect, and no one wants to take it because it costs so much money.” Another lawyer noted that the collect-call system prevented many lawyers from taking immigration cases. After completing our interviews, we investigated the cost of phone cards for detainees being held at the Ramsey County Jail. For calls to cell phones of attorneys, friends, or family members located more than 15 miles from the jail, detainees were charged $3.50 per call, plus $0.49 a minute. Thus, a 25-minute call would cost $15.75, more than the Qwest residential rate for an entire month of unlimited local telephone calls. Given the number of attempts that it often takes to reach someone at home or in the office, the minimum $3.50 per call charge poses a formidable barrier to communication for detainees.

Detainees’ abilities to locate counsel are also limited by the failure of detention facilities to provide clear instructions on setting up phone accounts and by the high rates charged for phone service. Detainees are also unable to access phones during facility
lock-downs. Some facilities do not deliver attorney phone messages to detainees, and in many cases calls are limited to short periods of time, after which the phone service is cut off.

Finally, language barriers posed another serious impediment to telephone communication. Attorneys reported that instructions for phone accounts and equipment were in English, making it difficult or impossible for many clients to comprehend. In addition, several attorneys reported their own difficulties deciphering calls from their clients because of a lack of translation services.

**Barriers to Written Communication.** The attorneys we interviewed noted that barriers to written communication prevented lawyers from providing clients with important legal information and documents, and prevented clients from sending necessary documents to their attorneys. ICE standards state that incoming mail shall be delivered to detainees within 24 hours of receipt, and that outgoing mail shall be sent within 24 hours. Furthermore, staff members are prohibited from reading or copying mail. Despite these standards, 65% of the attorneys we interviewed reported significant barriers to written communication, including late delivery, lack of privacy, and their clients’ inabilities to access basic materials, such as envelopes and stamps. One attorney reported that clients were forced to handwrite documents:

> One big problem is that there is very little access to typewriters or computers in detention, especially here in Minnesota. So pro se respondents tend to try to do everything handwritten and that makes it a lot more difficult to actually write a brief.

In some instances, unreliable mail service forced attorneys to waste time and resources traveling to detention facilities to obtain signatures. Even more seriously, in many cases documents were returned because ICE had transferred the immigrant detainee from one facility to another, without notifying the lawyer. The following comment reflects the sentiments of several attorneys we interviewed:

> ICE won’t tell us, and the client won’t know until it happens, but if they are transferred from one county facility to another, we won’t get any notice of it. I’ll send documents to

a client at Ramsey and, if they’ve been transferred to Albert Lea (Freeborn County), the client won’t get the documents because they are at another facility. The documents get sent back and it causes delay in terms of us being able to then get it forwarded to the new facility where the client is being held.

The unannounced transfer of immigrant detainees represents the most basic and egregious impediment to legal representation. As one attorney reported,

> The last time I tried to locate an immigrant, the jail told me they couldn’t confirm if my client was there or not.

**Lack of Access to Personal Property.** ICE standards recognize detainees’ rights to access personal property, and documents held by ICE must be provided to the detainee upon request. Despite these clear standards, many attorneys reported that their clients were unable to access important documents, either because the property was misplaced or because it was inappropriately withheld. The confiscation of cell phones was a particular problem, as described by one attorney:

> That’s a problem because most of what they bring in gets tagged, but they limit access to it, especially cell phones. Nobody knows anyone’s number anymore because they are all programmed into cell phones, and when I say, “how can I get a hold of so-and-so?” they say, the number is in the cell phone. You can’t do much with that.

**Visitation with Third Parties.** Visitation restrictions further impede detained immigrants’ abilities to obtain important legal documents. ICE standards set forth procedures for visitation between detainees and their families, friends, and legal representatives. However, 81% of the attorneys we interviewed reported that their clients had difficulty communicating or visiting with family members and friends. Most attorneys reported that their clients did not receive visitors because they did not understand the rules and procedures for visitation, they lacked the required information, or family members and friends were too afraid to visit, for fear of being detained themselves. In some cases, families ask a family friend or employer to assist the detained family member. The problem in these cases is that the facility requires that the detainee provide specific information about visitors in advance, such as their date of birth. One attorney commented:

> They didn’t know the birthdates and they couldn’t get on the list. These are friends. Think of your closest friends, do you necessarily know, off the top of your head, their date of birth, month/date/year? Or, for that matter, an employer who is a friend? And you’re stressed and you have a language barrier. So no, you’re not going to get the people you need on the list.

When family members or friends are unable to visit a detained immigrant, it may block access to funds and other important documents. It also creates emotional distress and impedes communication. Even when family members are able to visit, attorneys reported that detention facilities limited the visitation to short video meetings, rather than in-person visitation, which does not allow enough time for family members to discuss issues relating to a case.

**Lack of Interpreters.** ICE standards stipulate that “detainees shall have frequent informal access to and interaction with key facility staff members, as well as key ICE staff, in a language they can understand.” However, almost all attorneys mentioned language barriers faced by their clients, and many reported that detention facilities lacked foreign language interpreters, making communication impossible. The inability to communicate with facility staff exacerbated immigrants’ difficulties using telephones, accessing funds and personal documents, receiving visitors, and obtaining medical care. A public defender commented on the lack of interpreters in the Sherburne County facility:

> No one in the whole jail staff—and they have over 175 people that work

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10 The United States has 8.8 million members of households of mixed immigration status (i.e., households with a combination of U.S. citizens, documented immigrants, and/or undocumented immigrants). An estimated 6 million U.S. citizen children have an undocumented immigrant parent. See “Severing a Lifeline: The Neglect of Citizen Children in America’s Immigration Enforcement Policy,” a report by the law firm Dorsey & Whitney to the Urban Institute, March 2009 (www.dorsey.com/probono_severing_lifeline/).
in the jail, including the doctors, and they have an alcohol treatment program—speaks Spanish. So they [immigrants] don’t qualify for alcohol treatment or any programming in the jail, because they don’t speak English.

**Other Conditions of Detention.** Human-rights groups have documented serious violations of rights that occur in immigration detention. Egregious violations pertaining to untreated medical conditions, some of which have resulted in deaths, have been widely documented. Other grave violations include abuse from staff and/or criminal inmates, overcrowding, barriers to religious practices, and dietary problems.

**Safety and Abuse Issues.** According to ICE standards, civil immigration detainees are to be housed separately from criminal inmates. However, all of the attorneys we interviewed reported that their immigrant clients were mixed in with the general jail population. When civil immigrant detainees are not housed separately from criminals, it blurs the line between criminal custody and civil immigration custody, and makes it difficult or impossible for facilities to follow ICE standards. Several attorneys reported that their clients were anxious and fearful of harm from criminal detainees. Worse, in our interviews, both public defenders and immigration attorneys reported official abuse of immigrant detainees. One attorney said:

> I hear about abuse a lot. The abuse isn’t simply physical abuse. There are a lot of correctional officers that will try to mess with an inmate’s psyche, and a lot of them are already vulnerable. Oddly enough, some of the protection the immigrant has is that they don’t speak the language, which may or may not be a good thing, but then of course correctional officers will resort to physical violence.

Some attorneys reported that mistreatment stemmed from the simple fact of being an immigrant. One attorney commented:

> I like to be positive and think that a lot of it stems from the language barrier. But a lot of the jail staff are [jerks] to immigration people. These clients have told me they weren’t fed on time; they weren’t given medical care when something’s wrong. The rules weren’t followed. They tend to be put in isolation more, put in segregation. I don’t think they’ve done anything behaviorally wrong, I think it’s a misuse of power.

Incidents in which immigrant detainees are punished for exercising their rights are particularly troubling. According to one of our attorney-interviewees:

> In Bloomington, they [detainees] get yelled at by the ICE officers sometimes. Sometimes they’ve been told, just because they are exercising their right to remain silent, that they are being uncooperative, and they (ICE) even write that down on their paperwork, which makes the bond to be set at a higher level.

**Medical Care.** The ICE standard for medical care requires all detainees to have access to health care. Despite this, 90% of all attorneys interviewed reported that they have had immigrant clients who have had problems obtaining needed medical care (Figure 6). The most frequent complaint was that detainees’ medical concerns were minimized and dismissed. Untreated medical conditions ranged in type and severity from dental problems to not receiving prescribed medications or treatments. Attorneys also reported that untreated medical care sometimes stemmed from language barriers or a lack of access to funds. Attorneys explained that if their clients did not speak English, they were unable to fill out the forms required for medical care.

**Conclusion**

Foreign-born persons deserve the same protections as U.S. citizens when they are arrested and held in detention. The U.S. Department of Homeland Security has issued ICE detention standards that address a detained immigrant’s right to safety and freedom from physical violence, right to access to medical care and needed medications, right to communication through mail and telephones, right to family visits, and right to representation, including the opportunity for private communication with attorneys. However, from the perspective of attorneys who handle immigration cases in Minnesota, clear violations of even the most minimal standards frequently occur. Furthermore, the proliferation of ICE subcontracts with local jail facilities further complicates compliance.

These violations have serious consequences. They prevent attorneys from accepting immigrant clients, receiving information relevant to legal cases, and meeting with or communicating privately with their detained clients. From the perspectives of immigrants in detention, violations of the voluntary

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ICE standards lead to prolonged and inappropriate detention; inability to secure legal advice and representation or to access important documents; physical isolation from attorneys, family members, and friends; inability to communicate with lawyers or corrections facility staff; instances of abuse from other inmates or staff; untreated medical conditions; and accumulated stresses that can cause or exacerbate mental health problems. These issues are not only reprehensible, but many are also flagrant violations of detainees’ civil and constitutional rights.

At a minimum reform must result in fundamental fairness, transparency, and accountability in the administration of immigration laws. Several of the attorneys interviewed made suggestions for how to achieve these needed reforms. *Fairness* would begin with regular Department of Homeland Security review of individual detention decisions to ensure that only those noncitizens who pose a danger to society are subject to ongoing incarceration, and that detainees are not subjected to abuse. In addition, the Department of Homeland Security must ensure that noncitizens are able to exercise their right to counsel. This would include access to free telephone services to contact an attorney and subsequently to communicate with him or her, as well as the opportunity for private, confidential, face-to-face meetings with an attorney with adequate translation services available. In no case should detainees be subjected to arbitrary time restrictions that limit interactions with counsel.

Fairness also includes the adoption of binding medical standards that ensure that detainees receive appropriate treatment and needed medication, and binding standards for the safekeeping of a detainees’ property at the detention facility so that he or she can access important documentation.

There are promising signs. In October 2009, the Obama administration announced that it would issue new ICE detention standards, and on March 31, 2010, as this article was about to go to press, the U.S. Supreme Court issued a decision that recognizes immigrants’ rights to fair judicial treatment. In *Padilla v. Kentucky*, the Court held that criminal defense lawyers must advise their noncitizen clients about the risk of deportation if they accept a guilty plea. In its ruling, the Court acknowledged that “the importance of accurate legal advice for noncitizens accused of crimes has never been more important.” We hope that the Department of Homeland Security will follow the spirit of this decision by introducing transparency and accountability into the treatment of incarcerated immigrants. This can only be accomplished by making the ICE detention standards mandatory for all regular and subcontracted facilities, and by developing protocols for data collection and independent inspection of detention facilities. Furthermore, detainees should be provided with explanations of their rights in languages that they understand, and the government should work with stakeholders to establish an independent hotline for detained immigrants, their families, or their attorneys to report noncompliance with standards.

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The research upon which this article is based was supported through a grant from CURA’s New Initiatives program. These grants support projects that are initiated by faculty, community organizations, government agencies, or students and that fall outside CURA’s existing program areas.
Community development encompasses three broad areas: physical development, economic development, and social development. Community-development corporations (CDCs) have traditionally been geographically based, concentrated on a specific neighborhood, and primarily focused on physical- and economic-development activities (for example, building and rehabilitating housing, providing financial and technical assistance to small businesses and entrepreneurs, and enhancing public infrastructure, such as green space and sidewalks). Most CDCs have remained small and undercapitalized, which has contributed to the rise of so-called area-wide nonprofit development entities that work on projects throughout a city, metropolitan area, state, or region.¹

“Area-wides” have been lauded for their ability to produce a greater quantity of housing or commercial real estate than their neighborhood-based kin. However, production capacity is only one capability that must be brought to bear if community-development initiatives are to complete projects successfully and meet the goals of local residents. Area-wides have been criticized for their diminished capacity for neighborhood advocacy.² This criticism is rooted in part in the recognition that, regardless of whether an organization


is taking a place-based approach to community development, development always occurs in the context of a local community.

In the Twin Cities, organizations such as Seward Redesign in Minneapolis and Sparc in St. Paul have a long history of neighborhood-based community-development work. To gain insight into the current work of CDCs, I conducted interviews with developers involved in two recent initiatives in the Twin Cities: the Winnipeg development in St. Paul co-led by Sparc and the Franklin Avenue Vision project in Minneapolis conducted by Seward Redesign. These projects illustrate the role that CDCs play in local planning and development, as well as their partnerships with area-wide developers to move locally conceived projects forward. This article describes findings from my interviews that highlight how local community-development efforts can be successful. The work upon which this article is based was supported by a Charles R. Krusell Fellowship in Community Development, a joint program of CURA and the Hubert H. Humphrey Institute of Public Affairs.

Case Studies in Community Development

The Winnipeg: Revitalizing Rice Street in St. Paul. In 2003, the St. Paul District 6 Planning Council completed a large-area plan for its service area, which is located in the north-central region of the city known as the North End. The goals for the community included maintaining a safe environment, strengthening the community identity and image, and maintaining and enhancing the built environment. In a subsequent small-area planning process for the Rice Street area of the North End, local residents agreed on the need to improve the streetscape through targeted redevelopment and increasing residential uses along the corridor. In addition to establishing building and streetscape design guidelines for the corridor to preserve community character, the plan also identified several priority sites for redevelopment along Rice Street.

Staff at Sparc, a CDC that serves the North End community, began monitoring the redevelopment sites that had been identified in the plan for purchase opportunities. With funding from the Greater Metropolitan Housing Corporation and the city of St. Paul, Sparc was able to purchase several parcels at one of these sites in 2004. However, Sparc was not able to obtain from the Minnesota Housing Finance Agency the tax credits necessary to help finance the redevelopment. To overcome this hurdle, the organization partnered with Legacy, a local for-profit developer that specializes in constructing affordable housing. Asked why Legacy agreed to work with them, Sparc Vice President of Development Pat Lamb explained,

We always try to find a local partner when we are doing a new development. Successful projects require buy-in from neighborhood groups who represent local residents, and politicians [who] will indicate to the state and to funders that the project is a priority for the community.... Sparc had already done a good job of working with the district council to factor in community concerns.

With a larger collaborator on board and support from local residents and politicians, Sparc was able to gain approval for tax credits and other financing necessary to complete the project. The result was a $12-million complex known as the Winnipeg that includes two mixed-used buildings with 28 units each of affordable housing. The structures, which opened their doors in February 2009, met the design guidelines laid out in the small-area plan for Rice Street, and even featured the first-ever green roof on an affordable residential structure in Minnesota. Plans are on track for a small neighborhood convenience store to expand into one of the commercial spaces in the complex and offer fresh produce.

The Franklin Avenue Vision in Minneapolis. What has grown into a planning project known as the Franklin Avenue Vision began as an effort to address a single neighborhood issue. In 2007, the Riverside Market, located at the intersection of Riverside Avenue and East Franklin Avenue in the Seward neighborhood of Minneapolis, announced that it was closing its doors permanently. Residents who lived near the market site formed a task force to facilitate discussion about future uses of the site. At the same time, the leadership of the Seward Co-op, a longstanding neighborhood business and provider of locally sourced foods, decided that their business had reached maximum capacity at its location at 22nd Avenue and East Franklin Avenue (less than one mile away from the Riverside Market). To offer more services, expand its market area, and defend against a chain store moving in nearby, the co-op expressed interest in relocating to the Riverside Market site. However, for the move to make sense, the co-op needed a larger building and more parking than was currently available on the site.

Seward Redesign, a CDC based in the Seward neighborhood, worked with the co-op board and the resident task force to find a solution that was workable for both parties. Seward Redesign served as the developer for the co-op, helped to purchase the site, and assisted a successful East African grocery wholesaler in the neighborhood to purchase the co-op’s previous building. Seward Redesign also participated in discussions with nearby residents about whether the site should be expanded to include two adjacent residential parcels to create more space for the store and a rain garden that can capture and infiltrate all of the stormwater up to a 100-year rainfall event. After the neighborhood and co-op management achieved agreement, the CDC led the way in obtaining the necessary zoning changes. With the
help of Seward Redesign, the new, expanded Seward Co-op was able to open its doors at its new site in early 2008.

The resident task force included in its final recommendations that a planning process should be conducted for all of Franklin Avenue east of the light rail station to guide future redevelopment activity. Seward Redesign, the Seward Neighborhood Group, and the Seward Civic and Commerce Association jointly applied for a Great Streets grant from the City of Minneapolis to fund such a project, dubbed the Franklin Avenue Vision. The City of Minneapolis awarded grant funds for the project and the partners agreed that Seward Redesign should provide staffing support for the Franklin Avenue Vision. The Vision’s steering committee formed a task force of business and community leaders to guide the effort, and organized community walks. Bruce Johansen, a local resident who joined Redesign’s board after participating in the Franklin Vision process, explained,

[Through the walks,] I was able to meet people in the neighborhood I might not have had the chance to otherwise, and hear about their concerns. We were able to point out areas to each other that we liked or didn’t like. I really felt like I was able to get a better understanding of neighborhood issues.

The Franklin Avenue Vision steering committee synthesized the community feedback from the walks into four themes: crossing, way-finding, biking, and greening. In consultation with CityDeskStudios, an urban design firm, the committee translated these themes into specific goals, strategies, and locations for implementation. The Vision project partners also sponsored a charette (a collaborative design session) to allow community members to provide additional input.

The process culminated in a series of experimental test projects that temporarily put into action many of the ideas from the community. The final plan was adopted by the board of directors of Seward Redesign, the Seward Civic and Commerce Association, and the Seward Neighborhood Group, producing a shared vision for Franklin’s future. Volunteers from the neighborhood used spray chalk and stencils to place text on the sidewalk pointing passersby to local restaurants and shops. Flowers were planted at various commercial properties and a prototype for a public bicycle maintenance rack was tested on the street. Custom stickers were used to place zebra-stripe crosswalks in artistic designs at pedestrian crossings, and volunteer crossing-guards helped people make their way across the street.

**The Complementary Roles of CDCs and Area-Wide Developers**

These case studies provide some general insights into the unique role that CDCs play in the community-development industry in the Twin Cities and elsewhere. CDCs have four essential characteristics:

- **Focus on locally initiated and driven projects.** CDC initiatives originate out of community visions or concerns. The CDC’s board of directors, which usually includes a number of concerned local residents, shapes each organization’s strategies and focus.

- **Technical adeptness and flexibility.** CDC staff members typically have backgrounds in any number of fields, such as law, organizing, for-profit real-estate development, government, or other areas relevant to community-development work. At the same time, these professionals are highly entrepreneurial, managing many aspects of the projects they undertake (including community engagement, neighborhood planning, negotiation, and finance).

- **Comprehensive and cumulative project focus.** With each project a CDC takes on, the organization considers how it supports past developments or planning efforts in the community, its relationship to current community issues and goals, and how it can facilitate future opportunities in the neighborhood. Development fees earned through the completion of projects support the ongoing work of the CDC.

- **Commitment to pursuing community goals.** Because they are focused on a specific neighborhood or area within a city, CDCs are well positioned to focus on redevelopment of specific parcels, and to direct investment into businesses, homes, and other assets that are already within the community.

In contrast to CDCs, area-wide nonprofit developers typically are not committed to a specific neighborhood or area of a city. These organizations often work in a variety of different communities, and often specialize in a particular area of community-development work, such as housing or business development. An integrated collection of projects such as the Seward Co-op and the Franklin Avenue Vision would lie
outside the purview of most area-wide organizations.

These characteristics position area-wide developers as outside actors when it comes to planning and designing community-development projects. However, the Winnipeg is an example of how the community relationships, political capital, and entrepreneurial capabilities of CDCs can be paired with the organizational and financial resources of an area-wide developer to move a locally conceived project forward. These two types of organizations are niche players within a mature, sophisticated industry that is engaged in work that can be particularly challenging. Both bring to the table critical strengths that are required for successful community-development efforts. In an environment where funding for community development has become significantly constrained, it is essential that foundations and other financial partners support community-based CDCs for the invaluable long-range planning, integrated development, and community engagement they provide.

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The work upon which this article is based was supported by a Charles R. Krusell Fellowship in Community Development, a joint program of CURA and the Hubert H. Humphrey Institute of Public Affairs. The program was established to honor Chuck Krusell’s lifelong work in urban renewal and community development. The fellowship provides scholarship funds for University of Minnesota graduate students from diverse backgrounds who are enrolled in urban and regional planning and public policy programs at the Humphrey Institute and supports work on community development projects.

# The 2010 U.S. Census: Ensuring Everyone Counts in Minneapolis

**by Margaret Kaplan**

Since April of 2009, the Minnesota Center for Neighborhood Organizing, a program of CURA, has been partnering with the City of Minneapolis to coordinate outreach efforts for the 2010 U.S. Census. In 2000, the Census mail-in participation rate for Minneapolis was 68%. A number of events in the intervening 10 years will make the city’s population even harder to count this year. These include demographic shifts such as the growth of immigrant populations and non-English speaking residents, as well as the foreclosure crisis, which has produced more vacant properties and large numbers of families doubling up. In addition, there are many reasons why individuals may choose not to return their census form, including confusion about how the census works, fear of the government, and apathy. Unfortunately, if these barriers to participation are not addressed, people in undercounted communities will be denied their fair share of resources and representation for the next 10 years.

MCNO’s approach is to build relationships with key community leadership, and use the existing assets, knowledge, and expertise in these communities to support a campaign organized around the common goal of increasing Minneapolis’ participation in the U.S. Census. The primary vehicle for outreach is the Minneapolis Complete Count Committee (CCC), which is made up of a diverse group of community leaders. The philosophy behind the Minneapolis CCC is that people need to hear about the importance of the census not from the government, but from trusted community members, who have unique wisdom about what messages will speak to their community. This is particularly important for communities of color and immigrant communities, which make up an increasingly large percentage of the population in Minneapolis. The broad membership of the committee includes representatives from organizations such as the Minneapolis High Rise Council, MAD Dads, Somali Confederation of Minnesota, St. Stephens Homeless Shelter, Shiloh Temple, Archdiocese Hispanic Ministries, Asian Media Access, and La Asamblea de Derechos Civiles. Unlike some complete count committees that are resource focused and government driven, the Minneapolis CCC is action focused. Each member is expected to make commitments to doing census outreach work, and there is a process of accountability to ensure that commitments are honored.

Although the Minneapolis CCC represents some of the hardest-to-count areas of the city, MCNO also has worked to actively build community partnerships outside of the CCC structure. In January, MCNO, in partnership with the Main Street Project, organized a Census Leadership and Training Conference, bringing together more than 100 community leaders to develop strategies for outreach to hard-to-reach communities. Additionally, MCNO created partnerships with campus-based organizations, neighborhoods, communities of faith, and schools. Other activities have included census promotion at key community celebrations such as Somali Eid Festivals, count-a-thons in hard-to-reach communities, a census salsa event, media coverage in both mainstream and ethnic media, and door-to-door census outreach. Together, these efforts will help to ensure that everyone counts in Minneapolis.

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In 1996, the United States eliminated the entitlement to cash assistance for low-income citizens with the passage of historic welfare reform. With the institution of time-limits on cash assistance, the policy goals of the social-welfare system shifted from “income support” to “work support” and the welfare rolls decreased substantially. Although policy goals changed, the service-delivery structures providing public benefits to low-income workers remained largely untouched. Cash and near-cash benefits, such as tax credits or food support, employment services, and other social services, have continued to be delivered through complex and fragmented systems built for another era. The operation of social-welfare systems continues to focus on documenting program eligibility through reams of paperwork, delivering employment services through a maze of contracts, and providing other services through piecemeal public investments that need to be supplemented with charitable efforts.

To improve upon these antiquated systems of social-welfare delivery, new practices of public governance that use a purposeful approach to system design, relying upon careful analysis and deployment of networks of public and private organizations, need to be employed to address important societal problems. In this article, I use such a purposeful approach to think through viable design options for social-welfare systems.
system reform consistent with the policy goal of actually “making work pay” for low-income citizens.

This work is informed by both a three-year research project that I conducted to investigate two networks of nonprofit organizations providing human services in Minnesota, and my own professional experience within philanthropy, where private funders are working with new institutions as critical, intermediary partners to enhance service delivery for low-income Americans. In the field-based study, I examined two networks that provide a myriad of social programs to low-income Minnesotans. In contrast to purposive design of networks advocated in this article, the networks I studied emerged from either top-down government funding or bottom-up organizing. In both cases, managers and leaders in direct-service organizations were trying to pool resources, learn from each other, and improve effective service delivery to citizens. In both cases, however, these essential tasks were inhibited by the convoluted nature of public funding and accountability, and the imprecise investment of private, philanthropic resources. This research impressed upon me the importance of thinking anew about social-welfare design. Incremental approaches to the system’s improvement will not create the level of change required to support low-income citizens facing the realities of the low-income labor market. We must significantly recalibrate the system for it to operate effectively.

Although it is possible to embark upon such a systems-design effort without understanding the context, such efforts rarely lead to practical alternatives. Therefore, this article first describes current social-welfare service-delivery structures shaped by federal and state policy to implement cash assistance, work support, and other social services for the poor. These current arrangements do not constitute a system at all, but rather have emerged from various, fragmented policy gestures that too often place additional burdens on low-income citizens rather than ameliorating these burdens. I then illustrate how purposeful public investment could create and leverage network-wide resources to improve social-welfare delivery. Although it is not feasible in Minnesota or any other state to completely “wipe the slate clean,” viable options for redesign of social-welfare systems do exist. A grant from CURA’s Faculty Interactive Research Program supported the initial field-based research that informed this article.

Current Social-Welfare Service-Delivery Structures

Scholars and social-welfare advocates within the United States often draw upon the “safety net” as a metaphor for public policies and service-delivery arrangements supporting the poor. Although some scholars have decried the holes in this net, the metaphor itself conjures up images of a coherent set of policies and aligned services designed to catch disadvantaged citizens during a crisis—during a “fall.” It implies a system that can operate as an integrated whole. However, in the United States, no such coherent social-welfare system ever really did exist.

A Historical Perspective. As in many countries, the first responses historically to poverty in the United States were local, charitable, and often religiously based. Local public leaders created poor houses both to provide shelter and food for the destitute and to control their movements. Many communities also developed charitable organizations, such as settlement houses and mutual-aid associations, to provide language instruction, childhood enrichment, and other family services for those in need; these essential community institutions provided important avenues for low-income families’ advancement. Although many public poor houses were closed early in the 20th century, many original charitable social-service organizations continue to operate today. Minneapolis’s Pillsbury United Communities and East Side Neighborhood Services, as well as St. Paul’s Neighborhood House, Phyllis Wheatley Community Center, and Keystone Community Services, reflect this tradition. During the last 50 years, however, these organizations have increasingly relied upon public funds to supplement local charitable gifts to grow and support their various programs.

At the national level, the 1935 Social Security Act established a foundation for social-welfare policy that was incrementally built upon through the 20th century. It created expectations of minimal income-support for the aged and other vulnerable groups. Some changes to the act enhanced its initial premise, such as providing income support to disabled adults or extending benefits to needy parents. Others tried to address emerging issues, such as changes in family structure, expansion of women’s roles, and increased volatility of labor markets. Most changes were passed incrementally, often through categorical programs with eligibility requirements or program rules that often did not align with other efforts. Public bureaucracies sometimes provided the main service-delivery infrastructure. Other times, private organizations, either as service providers or mechanisms to harness community resources, delivered services. Public entities governed some policy arenas, whereas boards of public, nonprofit, and business elites governed others. Over time, the social-welfare policy arena became carved up into narrow implementation structures, each charged with carrying out a particular set of programs.

Current Service-Delivery Programs.

Many public social-welfare programs focus on granting cash or near-cash support to low-income citizens. Some of these programs, such as the Temporary Assistance for Needy Families program, provide direct cash on a time-limited basis. Others provide subsidies for particular goods, such as food, medical care, or child care, or focus on changing citizen behavior, such as child-support enforcement programs. In these programs, public bureaucracies are the main institutions administering public benefit. For some programs, such as Medicaid and food support, federal rules shape much of program administration, whereas state governments play a more supporting role. For cash assistance, child support, and child-care subsidies, significant administrative authority rests with state governments. In some instances, such as in Minnesota, statesdevolve significant responsibilities to county governments. Thus, even though public organizations implement these programs, policy and practice vary considerably among the states.

Starting in the 1980s, public-welfare bureaucracies began contracting with private organizations to deliver services that did not involve cash or financial benefits. Employment services, culturally specific programs, and enhanced case management for multiproblem clients are all provided by private organizations. For example, many nonprofit community action agencies operate the Head Start program, which provides early education enrichment and family support to very low income children. Federal and state governments predominately fund these agencies and, as with the public bureaucracy, top-down rules guide their administration.
A parallel service-delivery infrastructure consisting of a dizzying array of programs and administrative authorities also exists for workforce development programs. Federal and state public policies fund training, job placement, and retention, either for workers who have lost their jobs or for employers in markets with a limited supply of workers. In Minnesota, 16 state and federal agencies administer 71 public workforce development programs. These public agencies, in turn, work through community or technical colleges or private for-profit and nonprofit agencies to deliver actual training and workforce-development services.

In addition to income-support and employment programs, federal and state governments also use private agencies to implement other programs for the poor. For example, community-based organizations have been granted public contracts to fund child care and emergency shelter, food banks, and English classes. Funding for these efforts comes from various state, county, and city departments; oftentimes, more than one funder supports such programming. Each funder has its own grant or contracting application, proposal or bidding processes, negotiation terms, and accountability requirements, which create significant administrative complexity within the local service providers.

Such service arrangements evolved as local organizations or public entities began to carry out the social-welfare policies adopted incrementally over the last century, creating a mass of administrative systems ostensibly focused on supporting low-income workers. For administrators, technical details of cash assistance programs must be distinguished from other programs, such as Medicaid, energy assistance, employment training, and child care, because of the policy requirements regarding eligibility and access. However, as this brief overview highlights, such specialization can create a maze of programs, each with different entry points and accountabilities. The current arrangements also significantly shape day-to-day operations on the ground. Staffers in both public organizations and private agencies spend countless hours dealing with the consequences. They assist citizens in completing applications asking for the same information again and again; they refer citizens to other entities for services without clear mechanisms of follow-up; and they document results for narrowly defined funding sources that cause them to lose sight of real assessment of citizens’ needs. What often gets lost among this activity is the ultimate goal of public policy: Are low-income Americans able to navigate the labor market and adequately support their families?

Principles that Ground Social-Welfare Delivery-System Design at the Front Lines

Low-income citizens feel the consequences of the current social-welfare delivery arrangements most acutely. The magnitude of the challenge for these individuals is significant: citizens earning at or near the minimum wage face considerable job instability, with job cycling and lay-offs being common; former welfare recipients and other low-income workers’ earnings tend to remain low over the long-term; and few low-income jobs provide health, dental, or retirement benefits, yet these workers often struggle with health problems that can inhibit their abilities to retain work. Employment alone does not address these challenges. Although public policies and programs do exist to help with some of these issues, significant barriers exist to accessing virtually all social-welfare programs.

To make the situation more concrete, think for a moment of a low-income single mother. She might be working two jobs to make ends meet, shuttling a toddler back and forth to day care on a city bus, sharing an apartment with a friend. How does she navigate the current service arrangements? Alternatively, consider a middle-aged couple whose grown children repeatedly come to stay with them when experiencing transitions in their own lives. The couple’s history of retail work does not provide them a solid asset base or any access to health insurance which, as they age, is increasingly important. What type of public safety net can they access?

When either of these families seeks assistance from the public bureaucracy, they currently confront distinct applications for health insurance, food support, and child-care assistance. The same is true if they inquire about employment-training opportunities or assistance with energy costs at local nonprofits. Each program has unique eligibility criteria and required documentation; oftentimes programs must be accessed through different agencies, and referrals to other organizations.

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2 Minnesota Department of Employment and Economic Development, Governor’s Workforce Development Council, “Minnesota Inventory of Publicly Funded Workforce Development Programs,” 2003. Although this inventory was completed seven years ago, the situation has not changed significantly.

are common. The maze of relationships is difficult to understand. Often recipients do not know whether they are benefiting from public service or are merely the fortunate beneficiaries of private charity. Interestingly, to apply for “work supports” or attend eligibility interviews and benefit redetermination meetings, citizens often must take time from work. However, this process goes directly against the supposed goals of policy. To support low-income citizens so that they can work and improve their circumstances, our society needs to redesign these current social-welfare delivery arrangements.

To guide such a redesign, new principles must be articulated. In the work described here, I relied on an analytical tool known as “backwards mapping” that was developed many years ago by Richard Elmore. Rather than attending to incremental alterations to the current arrangements, backwards mapping focuses on the actual interactions that are desired between frontline workers and citizens in order to inform system redesign.

I started my analysis by examining the specific behaviors at the lowest level of implementation that have generated the need for policy intervention. For social-welfare delivery systems, the behaviors I examined are the realities faced by low-wage workers: What interactions should citizens experience from publicly funded agencies so their employment efforts are supported and they are able to manage their family issues? What interactions would enable them to pursue other opportunities? Think again about the previous examples of the single mother with a toddler working two jobs or the middle-aged couple who for years have worked at retail jobs that do not provide benefits, even though they must support their extended family. What interactions would support their work efforts and allow them to access public resources for which they are eligible? Beyond considerations of the citizens’ needs, backwards mapping also considers the needs of the public service system. What interactions would ensure an appropriate implementation of policy passed by elected officials?

In grappling with these questions, I offer four principles to help guide the redesign of the social-welfare safety net:

- **Fair application of policy.** Work-support benefits need to be targeted to family circumstances as delineated in public policy. Eligibility criteria need to be met and benefits distributed in a fair manner so that they reach groups for which they are targeted.

- **Provision of accessible services.** At the margins of the labor market, job hours rarely adhere to the conventional 9:00 AM to 5:00 PM schedule. As a result, public programs must be accessible at multiple times and have a range of access points. Information about public benefits needs to be communicated clearly for citizens with a wide range of abilities, and application processes must be user-friendly.

- **Appropriate matching of need to support and services.** The specifics of people’s lives vary and the need for work supports differs. Braiding various programs together for a particular families’ circumstances allows them to be provided more efficiently and effectively. When people are asked to reveal personal information to public systems, the process can be eased significantly if frontline staff and citizens speak the same language and share cultural references. Although it might be difficult in some locations to accommodate the diversity of all client populations, attention to small details often can ease relations tremendously.

- **Using reliable information to aid decision making.** In the new economy, information is plentiful, even overwhelming. Sources that provide consistent information and resources that help people answer the most pressing and persistent problems they face are crucial; such resources allow people to develop options when they must respond to the unexpected.

Implementation of such principles would assist, rather than hinder, citizens’ efforts to navigate the dynamics of the low-wage labor market. They are, in Elmore’s notion, characteristics of frontline interaction that are inadequately supported by current administrative practices and service arrangements. If realized, these principles also would improve citizens’ experience with government and potentially enable them to have more direct engagement in democratic processes.

Such principles should act as beacons guiding any new system-redesign efforts. Because backwards mapping starts from frontline conditions, it pushes system designers to move from a top-down analytical framework to instead design systems so they support interactions between staff and citizens adhering to these principles. These characteristics also define system effectiveness. Given the inherent limitation of public resources, this design process would benefit from the use of the tools of the 21st century such as networks,

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information infrastructures, and new approaches to public governance.

Elements in New System Design for Social-Welfare Delivery
In the new era, public bureaucracies are no longer the dominant administrative apparatus in the social-welfare system. As a result, we must identify design elements rather than particular structures that take advantage of networks and are able to take on different forms depending upon state and local resources. Although it is possible to conceive of a national design, it is more likely that administrative authority in social welfare will continue to rest at the state level. Some states might be poised to include the full range of cash and near-cash benefits, employment, and social-service supports; others might focus on a narrower programmatic band. Each state faces some choices in terms of how to proceed. In some places, it might be possible merely to align and update system elements; in others, it will be necessary to dismantle an old arrangement and replace it with a new system. In all situations, specific design elements can be applied. Table 1 summarizes the system design elements—direct-service providers, intermediaries, and public governance—that emerged from my application of backwards mapping analysis to the challenges of current social-welfare service delivery. Each element includes unique roles and core competencies upon which the others depend. I next examine each element in turn and provide, for each element, promising lessons from current examples throughout the country.

**Direct-Service Providers.** Direct-service organizations work directly with families, offering case management, early childhood education, work training, or other services that cushion the volatility of the low-wage labor market. They possess particular knowledge of community resources, client circumstances, and local labor-market dynamics. With this knowledge, staffers can embody the backwards mapping principles elucidated previously by providing services that are fair, accessible, appropriate, and reliable.

**Intermediary Organizations.** Work to increase the efficient sharing of resources within the network around the following:
- Financial resources
- Program capacity
- Organizational capacity
- Network capital
- Policy understanding
- Joint fund development for public and private sources
- Tools and technical assistance for direct service
- Facilitated peer learning
- Advocacy training, fiscal and social analysis

**Public Governance Systems.** Work as systemwide guardian to achieve public intent (enable workers to navigate and thrive in low-wage labor market):
- Fair eligibility determination
- Design and integrate network
- Guard against private-interest capture
- Monitor systemwide results
- Electronic application and eligibility verification

Low-income citizens need trusted resources that can help them strategize about how to navigate through the inevitable challenges that arise. Seasoned staffers recognize the morality of direct-service work, and know that trust comes through quality relationships. Oftentimes effectiveness of service delivery hinges on staffers’ ability to work with clients to achieve small wins. To do so, frontline staff members need organizational access to resources, tools, and information that they can customize to a particular family’s needs in a particular community.

**Examples.** Some direct-service providers are currently experimenting with approaches aimed at overcoming limitations and operating more in keeping with the new system-design principles identified here. National foundations are investing in Centers for Working Families in 13 metropolitan areas, with others under development. Controlled social experiments are also underway in three local Work Advance-ment and Support Centers. At all these sites, a broad range of employment, financial services, and income supports are combined, sequenced, and delivered to clients. Staff members help low-income workers stabilize income, access public work-support programs, and obtain fairly priced financial services by resolving credit problems. Another model operates in rural North Carolina and Minnesota. In that model, nonprofits rely upon computer software to enrich, automate, and track clients in ways not typical with traditional case management. Staffers can access information about employment, transportation, child care, and other services across a large geographic area through comprehensive databases and client-management software. Flexible philanthropic dollars and, increasingly, public funds support these examples of direct-service initiatives. Information systems that integrate services across the silos of current service arrangements bolster these programs. In addition, these programs build upon the unique role that community-based organiza-

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5 A preliminary assessment of the first initiative, initially sponsored by the Annie E. Casey Foundation, is due in late 2010. MDRC is conducting the second experiment. For more information, visit www.aecf.org /MajorInitiatives/FamilyEconomicSuccess / CentersforWorkingFamilies.aspx or www.mdrc.org/project_14_40.html.

6 Northern Connections operates in west central Minnesota and Connect, Inc. operates in rural North Carolina.
tions can play in helping single parents confronted with unstable employment and limited social support.

**Intermediary Organizations.** Intermediary organizations are a second design element in a more coherent system focused on the new reality of low-income workers. These organizations garner information and resources to decrease transaction costs between two parties—in this case, direct-service providers and the state—and increase operational efficiencies and program effectiveness. Although not yet widely used in social-welfare safety-net programs, intermediaries play important roles in other fields, such as mental health, community economic development, and affordable housing. These fields resemble social welfare because they receive diverse forms of government funding and have redesigned their service systems in light of significant policy changes. Intermediaries can provide access to new sources of financing, offer program tools, bolster management support, create networks among similar organizations, and cultivate policy knowledge (Table 1). They also provide information to public decision makers about the successes and challenges of policy implementation visible from the vantage point of frontline agencies. Where neither pure markets nor public provision operates effectively, intermediaries enhance systems capacity.

In the last 15 years, some private foundations have realized that, in a decentralized social-welfare system, purposeful investment in intermediaries is wise. Because many of these efforts are currently being evaluated, no definitive conclusions can be drawn; however, they offer some promising practices to consider. For example, some intermediary organizations have developed an online benefits tool, which allows frontline staff to help citizens assess their eligibility for public work-support benefits, such as food support, health insurance, tax credits, and energy assistance. Other intermediaries build program capacity by developing and sharing specific technical knowledge. For example, helping low-income citizens access tax credits requires technical knowledge about tax preparation, distinctions between state and federal rules, and electronic-filing processes. Intermediaries such as the Center for Economic Progress and Accountability Minnesota help direct-service organizations recruit volunteers, offer certified training, and monitor results. Because many categorical public programs are quite technical, intermediary organizations can specialize in particular arenas and share this expertise. Intermediaries also can build networks and policy awareness among direct-service organizations. Often, they convene people from different vantage points to share information and grapple with how to solve collective problems. For example, the Minneapolis-based MACC Alliance of Connected Communities regularly convenes 26 direct-service organizations. Through a combination of peer learning and formal training, valuable knowledge is developed and shared across the network. Such meetings also serve as learning venues for county and state policy makers, offering insight into how policy ideals manifest near the ground. As Table 1 summarizes, these examples point to various important roles that intermediaries in system redesign play. In the new reality, where government and nonprofits work together to implement and refine policy, such activities are essential to enable networks to operate as coherent systems. They help to ensure that our design principles of appropriate services and reliable information can be implemented at the front lines.

**Public Governance Systems.** The final design element in a new social-welfare delivery system is an entity serving as a neutral administrator, monitor, and system designer.
Governance is the process of deciding direction and assuring accountability, such as the role the Metropolitan Council plays in overseeing Minnesota’s metro-area transit and development plans. Neutral public governance can also be housed in state agencies, such as the Minnesota Department of Education’s role in elementary and secondary education. In social welfare, public policies define particular criteria for cash and near-cash benefits and, as a result, eligibility determination for these programs should not be outsourced to intermediaries or private providers. However, current program administration could be improved. In many states, such as Minnesota, state or county staff members determine eligibility for programs such as cash assistance, food support, or child-care subsidies. Yet Utah has centralized eligibility determination at the state level and is using information technology systems to streamline processes. For some programs, applications are taken online; for others, application materials are electronically accessible. Rather than requiring applicants to provide paper documentation of wages, assets, and address, staff use electronic information now readily available from other state agencies. Many states, including Minnesota, use such approaches in other work-support programs, such as unemployment insurance. A similar approach could be used to improve social-welfare implementation and establish a clear public governance function.

A robust public governance system for social welfare also could ensure that citizens can access information about public investments and results. Multiple, and sometimes competing, goals are reflected in current social-welfare policy: enhancing earning from low-wage work; providing early-childhood education so parents may work; limiting access to cash assistance; limiting family size; and providing emergency services. Even more minute performance measures structure the reporting requirements of various service providers. Although political realities about poverty created this diversity, adequate public governance can guarantee that minute measures are not what orient the operation of the entire work-support system. Instead, governance can involve a public process toward clear, systemwide results in line with principles of fair, accessible, appropriate, and reliable system operation. Once articulated, measured, and used, such information can be used to ensure that the safety net is actually operating as a coherent system.

The role of public governance systems in social-welfare redesign also pushes public managers to assume different roles than in traditional public bureaucracies. They must embrace their critical perspectives as system designers and facilitators, thus moving beyond the details of the legislative mandates, implementing institutions, and professional relationships that have de facto become social-welfare service arrangements.

Figure 1 offers one visual representation of a network design option incorporating all of the elements discussed in this article. This representation assumes that—as with markets—coherent public-service delivery systems can be built with rules, institutions, and knowledge from an array of public and private organizations. The United Way, private foundations, and corporations already invest in ways that serve low-income citizens. However, the critical linkages between these entities and other system components are often not made because of a lack of public governance. To move forward implementation of the ideas in this article, and based on the insight from backwards mapping analysis, public governance needs to be improved and focused on purposive system design in the social-welfare arena. It should capitalize on the investments of other funders and the existing and potential expertise of intermediaries, and leverage the knowledge within frontline organizations.

Figure 1. State Level Network of Funding and Other Implementation Resources
True public governance would require thinking carefully about how to arrange these design elements given particular state or local settings. In a particular state, what are the most effective sites for providing direct services that support low-income workers? Is a co-location or call center model more effective in reaching families in particular regions of the state? What intermediary organizations can provide resources to enhance the program, organizational, and network capacity of direct-service organizations? How can these various nodes be linked through information systems to facilitate efficient and effective communication about benefits, community resources, or program innovations? Although the specific answers to these design questions will vary state by state, developing them is fundamental to effective public-network operation.

Moving Forward
In the last 10 years, the goals of the American welfare state have dramatically shifted away from providing income support; although temporary cash assistance remains available to very needy citizens, the focus of government intervention is now on supplementing earning and providing employment and social services. Unfortunately, the system of public-service delivery has not shifted to account for this change. The realities of the 21st century necessitate that we consider how advances in systems design can be used to realign the public-welfare system to more effectively achieve policy goals.

Backwards mapping focuses our attention on the frontline experiences of citizens. From the vantage point of the single mother with a toddler working two jobs, the middle-aged couple working retail, or the frontline staff in public-welfare offices or nonprofit multiservice organizations, the characteristics of high-quality service delivery are clear. Eligibility for services must be assessed fairly. Services must be accessible to citizens with inflexible work schedules. Services must be matched to particular family circumstances. Assistance must be given to help people sift through the mass of information they encounter about work supports. Although direct-service organizations have essential roles in carrying out these visions, their work must be supported by a network of resources. Intermediary organizations can provide some essential elements, with their unique ability to package resources in ways not accessible to many direct-service providers. In addition, public governance is needed to ensure proper design, alignment, and performance of the whole network.

No state is currently operating a complete system as envisioned here. In fact, it is now popular to assert that merely moving to performance contracting will reform the social-welfare system. However, the nature of the problem at hand—responding to the challenges created for citizens by the low-wage labor market—requires more significant public governance. In fact, much of the redundancy, complex relationships, and categorical program silos that exist in current service arrangements arose because of the lack of such oversight. As the examples provided throughout this article suggest, private funders and organizations are experimenting with approaches to reconstitute the safety net based on the new reality of social needs. It is time to redesign the social-welfare safety net so that it addresses problems of citizens rather than contributes to them.

Jodi R. Sandfort is associate professor of public affairs at the Hubert H. Humphrey Institute of Public Affairs at the University of Minnesota. Her research focuses on improving the implementation of social programs at the frontline, organizational, and systems levels.

A grant from CURA’s Faculty Interactive Research Program supported the initial field-based research that informed this article. The program was created to encourage University faculty to conduct research with community organizations and collaborators on issues of public policy importance for the state and community. These grants are available to regular faculty at the University of Minnesota and are awarded annually on a competitive basis.

Will Craig Earns Spot in GIS Hall of Fame

Will Craig, associate director of CURA, was selected for inclusion in the Geographic Information Systems (GIS) Hall of Fame by the Urban and Regional Information Systems Association (URISA). The honor was bestowed in September 2009.

“Will has made the University of Minnesota a major player nationally in the GIS community, and he has made CURA an invaluable partner for many community organizations in the Twin Cities region,” says Edward Goetz, director of CURA. “What is wonderful about his work in GIS is that it combines national leadership in this field with real, practical engagement with local communities.”

Craig entered the University of Minnesota in 1960 as a freshman, studying math and technology. He eventually earned his doctorate in geography from the University, and then directed the West Bank Computer Center until 1970, when he joined CURA as associate director. In the early 1970s, Craig also began as system manager and project director of the Minnesota Land Management Information System, one of the first GIS in the nation. He is cofounder of the University’s master of geographic information science professional degree program, and he continues to teach an Urban GIS course through the geography department that pairs students with community organizations that have a GIS project need.

Craig has helped to shape the field through his pioneering work in public participation GIS, taking steps to bring GIS out of the institution and make it useful to those in the community. “Will’s contribution to public participation GIS has been significant and he is one of the founders of the movement,” says Nancy Obermeyer, one of Craig’s Hall of Fame nominators. “The democratization of this valuable technology has enabled many local organizations to speak truth to power, contributing their insights to policy debates that affect them and their constituents.”

Adapted from an article Stephanie Wilkes, University Relations. The original article can be found at http://www1.umn.edu/twincities/faculty-staff/features/2010/UR_ARTICLE_184711.html.
Project Funding Available from CURA

The Center for Urban and Regional Affairs supports community-based research projects through several different programs. If you represent a community organization or agency and are unsure which program listed below is most suitable for your project proposal, simply complete a general Community-Based Research Program Application Form at www.cura.umn.edu/Programs/curaappform.html and we will route your request to the appropriate program.

■ The Community Assistantship Program (CAP) matches community-based nonprofit organizations, citizen groups, and government agencies in Greater Minnesota with students who can provide research assistance. Eligible organizations define a research project, submit an application, and if accepted, are matched with a qualified student to carry out the research. The application deadline for fall semester 2010 assistantships (early September to mid-January) is June 30, 2010. For more information, to discuss potential projects, or for assistance with applications, contact CAP coordinator Will Craig at 612-625-3321 or wcraig@umn.edu, or visit www.cura.umn.edu/cap.php.

■ The Communitiversity Program funds quarter-time graduate student assistantships for one semester to help community-based nonprofit organizations or government agencies with a specific project. The application deadline for fall semester 2010 assistantships (early September to mid-January) is June 30, 2010. For more information, contact CURA community program assistant Jeff Corn at 612-625-0744 or curacbr@umn.edu, or visit www.cura.umn.edu/communiversity.php.

■ Neighborhood Partnerships for Community Research (NPCR) provides student research assistance to community organizations in Minneapolis, St. Paul, and metro area suburbs that are involved in community-based revitalization. Projects may include any issue relevant to a neighborhood’s or community’s needs and interests, including planning, program development, or program evaluation. Priority is given to projects that support and involve residents of color. Applications from organizations collaborating on a project are encouraged. The application deadline for fall semester 2010 assistantships (early September to mid-January) is June 30, 2010. For more information, visit www.cura.umn.edu/npcr.php or contact NPCR program director Kris Nelson at 612-625-1020 or ksn@umn.edu.

■ Community Growth Planning Assistance Center (CGPAC) provides land-use planning related research and technical assistance to help growing communities on the edge of the Twin Cities metropolitan area manage growth in ways that make development more sustainable, environmentally responsive, and economically efficient. Eligible communities define a research project, submit an application, and if accepted, are matched with a qualified graduate student or faculty member to carry out the research. The application deadline for fall semester 2010 assistantships (early September to mid-January) is June 30, 2010. For more information, to discuss potential projects, or for assistance with applications, contact CGPAC program coordinator Mike Greco at 612-625-7501 or mgreco@umn.edu, or visit www.cura.umn.edu/cgpac.php.

■ The Minnesota Center for Neighborhood Organizing trains people to work effectively in organizing and staffing neighborhood organizations. It trains new organizers and increases the skills of existing neighborhood staff through internships, workshops, and other programs. For more information about the program and the training opportunities available, contact Jay Clark at 612-625-2513 or clark037@umn.edu, or Margaret Kaplan at 612-624-2300 or mkaplan@umn.edu.

■ The Community Geographic Information Systems (CGIS) program provides technical assistance in mapping, data analysis, and GIS to community-based organizations and nonprofits in the Twin Cities metropolitan area. CGIS staff specialize in parcel-level mapping, demographic analysis, and Internet-based GIS technologies. There is no formal application process or deadline to apply. Project requests are taken by phone or e-mail, and generally can be turned around within two weeks. For more information, to discuss potential projects, or for assistance with data needs, contact CGIS program coordinator Jeff Matson at 612-625-0081 or jmatson@umn.edu, or visit www.cura.umn.edu/cgis.php.

■ The University-Neighborhood Network (UNN) links community organizations to course-based neighborhood projects that students carry out as part of course requirements at a Twin Cities college or university. Organizations that participate in the program identify projects with which they need assistance. UNN then locates faculty who teach courses that meet the organization’s needs, and students who have an interest in the proposed project. Participation in UNN is coordinated through a web database system. For more information, visit www.cura.umn.edu/unn/, or contact UNN coordinator Jeff Corn at 612-625-0744 or unn@umn.edu.

■ The New Initiative Program accepts project proposals from community organizations, government agencies, and University of Minnesota faculty and students for projects that are inappropriate for or unrelated to other CURA programs. CURA is always looking for a good new idea, and supports many new projects outside of our existing program areas. The best approach is to call us to discuss the idea; if it looks worthwhile, we will encourage you to write a brief proposal. For projects supporting government agencies, we usually seek matching funds. Maximum support for a project is generally a half-time graduate student research assistant for one academic year; support for one semester is more typical. For more information or to discuss a project idea, contact CURA director Ed Goetz at 612-624-8737 or egoetz@umn.edu.
Endocrine disruption in wildlife has become a source of concern for the public and a subject of intense scientific research. Endocrine disruption occurs when chemical compounds interrupt normal hormonal function in humans and/or wildlife, resulting in infertility, intersex characteristics, and other reproductive and developmental problems. The full extent of the problem is unknown, but scientists agree that endocrine disruption is occurring in wildlife as a result of environmental pollution. One major group of chemicals in the environment that has gone widely unacknowledged with respect to this problem is phytoestrogens.

Phytoestrogens are hormonally active compounds that are naturally present in many plant species (see sidebar, p. 39). These compounds are abundant in some plants, particularly legumes (e.g., soy, alfalfa). Interestingly, although scientists have found that phytoestrogens cause significant developmental and reproductive effects in fish, they are now routinely used as “natural” hormone supplements for postmenopausal women. In environmental studies, scientists have measured significant levels of phytoestrogens in the waste discharged from pulp and paper mills; however, little research has been conducted on the release of phytoestrogens from other industries, and little is known about their fate during wastewater treatment.

In our recent research, we identified a variety of industries, including biodiesel, soy-oil processing, and dairy, that discharged significant amounts of phytoestrogens in their waste. Typically, industries do not discharge their waste (known as effluent, see sidebar, p. 39) directly into streams and rivers; instead, they discharge their waste to municipal wastewater treatment plants. We found that phytoestrogens can be removed from industrial effluent through biological treatment processes at typical wastewater treatment plants. Unfortunately, existing treatment processes do not always remove phytoestrogens sufficiently.

This article explores the sources and impacts of phytoestrogen pollutants, and presents our results regarding some industrial sources of these compounds and whether and how the treatment of wastewater removes these compounds. The research upon which this article is based was supported in part by a grant from CURA’s Faculty Interactive...
Estrogenic Compounds in the Environment

Endocrine-disrupting compounds (EDCs) are chemicals, either synthetic or natural, that interrupt the normal function of the endocrine system in humans and animals. Researchers have found estrogenic compounds in streams, rivers, and lakes throughout the world, as well as in the effluent of wastewater treatment plants in the United States, Europe, Asia, South America, and Australia. These compounds generally come from us, because wastewater treatment plants simply act as collectors that funnel our waste, and the hormones or hormone mimics in that waste, into the environment.

Synthetic estrogens from contraceptive pills, hormone-replacement therapy, surfactants, and plasticizers, as well as natural estrogens discharged by people in their urine, all end up in our wastewater and, from there, can be discharged into our rivers and lakes. This discharge becomes a significant problem in areas with large wastewater flows that can, in some instances, contribute the bulk of the water in a stream. In addition, some estrogenic compounds degrade poorly and remain in the environment for long periods of time, where they can spend more time interacting with fish.

In addition to studies that have shown the widespread and global presence of estrogenic compounds in lakes and rivers, other studies have reported the effects of these compounds on wildlife. For example, many studies have identified abnormal sexual development in fish populations, which has been thought to be a result of estrogen discharge from wastewater treatment plants. In perhaps the most striking and disturbing study to date, scientists performed a seven-year whole-lake experiment in northwestern Ontario, Canada, in which very low levels of the active compound in contraceptive pills were added to a lake by the scientists themselves. In addition to observing abnormal sexual development of fathead minnows in the lake, investigators found that the minnow population decreased to near the point of extinction. This study clearly demonstrated that whole populations of fish can be at risk from estrogenic pollution, which can produce dramatic ecological effects by altering whole food webs.

Phytoestrogens

Phytoestrogens are plant-based chemicals that are similar enough to natural hormones found within humans and animals to mimic these natural hormones. These chemicals are present in many plants and occur in abundance in legumes such as soybeans, clover, and alfalfa. Scientists first demonstrated that phytoestrogens act as hormone mimics more than 50 years ago, when they observed that sheep fed on certain subterranean clover pastures in Western Australia suffered severe clinical abnormalities. The syndrome, called “clover disease,” included very low lambing rates and a variety of reproductive problems. Decades later, researchers found that this strain of clover contained high amounts of the estrogenically active phytoestrogens genistein, biochanin A, and formononetin. Since that time, other work has shown that phytoestrogens affect the behavior, immune system, and reproductive biology of many species, including fish, mice, birds, and humans.

Environmental discharge of phytoestrogens. Because phytoestrogens have the capacity to produce negative effects in a variety of organisms, these compounds have the potential to produce population-wide impacts if they are widely present. Unfortunately, potential sources for significant phytoestrogen discharge to the environment are not well understood. To date, only one potential source has been thoroughly studied: pulp and paper mills. In the late 1980s, researchers observed disturbing changes in the physical and sexual characteristics of fish populations associated with pulp and paper-mill discharge in Canada. In response to these findings, Canada enacted regulations in 1992 requiring additional treatment for mill effluents with the hope that this would remove the problematic compounds in the effluent. Although results have been somewhat mixed, evidence suggests that this additional treatment has alleviated many of the more severe impacts of the mill effluents on fish.

Methodology and Analysis of Results

Pulp and paper mills represent only one potential source of phytoestrogens discharged into the environment. Because phytoestrogens are present in most plants and are in particularly high concentrations in legumes, quite a few additional industries may be sources of these estrogen mimics. In fact, many of the industries that process plants known to contain high levels of phytoestrogens, such as soy, have never been investigated. The Food and Agriculture Organization of the United Nations

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estimates that worldwide agricultural production is increasing at 1.4% per year, which represents a huge and growing potential source of phytoestrogens release into the environment that should be investigated.

In our research, we took effluent samples from a variety of industries in Minnesota and Iowa and analyzed them for six common phytoestrogens: genistein, formononetin, biochanin A (all found to be involved in “clover disease,” as mentioned above), daidzein, coumestrol, and zearalenone. These compounds represent the phytoestrogens typically present at the highest concentrations in plants or phytoestrogens that are particularly estrogenic. We also visited three wastewater treatment plants that receive a high percentage of flow from plant-processing industries and sampled their inflow and effluent to determine how well the target phytoestrogens were treated across the plant.

**Industrial effluent studies.** In general, we found that the effluents of industries that process soybeans, such as biodiesel and soy-oil refineries, contained high concentrations of the phytoestrogens daidzein and genistein (Table 1). Surprisingly though, we discovered that an industry that did not process plants, a barbeque-meat processor, also had high levels of phytoestrogens in its effluent. We were also surprised to find that one of the three dairies that we sampled contained very high levels of phytoestrogens in its effluent (Dairy 2, Table 1). Upon further investigation, we discovered that this particular plant also manufactures soy-based nutritional supplements. Some of the industries that we sampled were discharging phytoestrogens at concentrations nearly 1,000 times higher than the levels of natural and synthetic estrogens that typically enter wastewater treatment plants, and up to 250 times higher than those levels at which reproductive and developmental effects in fish have been observed.

As mentioned above, however, industries rarely release their waste directly to streams, rivers, and lakes, but instead send their effluent to a local wastewater treatment plant. This process provides an additional layer of protection, because the industrial waste will be further treated. When we analyzed the inflow and effluent from three wastewater treatment plants, we found that, in general, elimination of the six target phytoestrogens was high—more than 90% of phytoestrogens were removed in all three cases. Unfortunately, in one case a city with a large soy-oil processing facility was unable to reduce the phytoestrogens concentrations sufficiently low levels, and was releasing environmentally significant levels of phytoestrogens to surface water (1,380 ng/L, or greater than the level at which effects on wildlife may occur, which is 1,000 ng/L). An additional point of concern was that some large plant-processing industries are located in small towns, which may use wastewater treatment facilities that are inadequate to sufficiently treat these estrogenic pollutants.

**Laboratory wastewater treatment studies.** In our laboratory, we are currently expanding on these findings by operating laboratory-scale wastewater treatment plants to determine how to optimize the removal of phytoestrogens. One of the primary ways that wastewater treatment plants treat waste is by encouraging bacteria to “eat” (degrade) these compounds in a controlled biological reactor, called the aeration tank (Figure 1). When this occurs, organic material is consumed, producing clean water. We were interested in determining how well bacteria were able to degrade phytoestrogens and in determining which bacteria were involved in this process.

We set up test reactors that operated like a scaled-down wastewater treatment plant. We then fed the reactors a chemical mixture that was similar to wastewater and included the phytoestrogens genistein and daidzein. We found that the removal of genistein and daidzein was linked to how long the bacteria were present in the reactor. This result suggests that bacteria that take longer to grow are the ones best able to degrade phytoestrogens. In fact, we observed that up to 98.4% of the genistein and 99.9% of the daidzein that entered the reactors was degraded if the bacteria were able to stay in the reactor for seven days. We also saw that if we decreased

<table>
<thead>
<tr>
<th>Industry Site</th>
<th>Concentration of Total Phytoestrogens (ng/L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biodiesel 1 (process A)</td>
<td>22,500</td>
</tr>
<tr>
<td>Biodiesel 1 (process B)</td>
<td>6,860</td>
</tr>
<tr>
<td>Biodiesel 2</td>
<td>1,300</td>
</tr>
<tr>
<td>Ethanol</td>
<td>4,740</td>
</tr>
<tr>
<td>Soy–oil processor</td>
<td>127,000</td>
</tr>
<tr>
<td>Soy milk</td>
<td>250,000</td>
</tr>
<tr>
<td>Bean processor</td>
<td>470</td>
</tr>
<tr>
<td>Peanut processor</td>
<td>6,260</td>
</tr>
<tr>
<td>Dairy 1</td>
<td>0</td>
</tr>
<tr>
<td>Dairy 2</td>
<td>39,900</td>
</tr>
<tr>
<td>Dairy 3</td>
<td>0</td>
</tr>
<tr>
<td>Brewery 1</td>
<td>880</td>
</tr>
<tr>
<td>Brewery 2</td>
<td>200</td>
</tr>
<tr>
<td>Soda bottling</td>
<td>830</td>
</tr>
<tr>
<td>Asian foods</td>
<td>700</td>
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<tr>
<td>Barbequed meat</td>
<td>30,800</td>
</tr>
<tr>
<td>Airline foods</td>
<td>0</td>
</tr>
<tr>
<td>Corn wet miller 1</td>
<td>110</td>
</tr>
<tr>
<td>Corn wet miller 2</td>
<td>0</td>
</tr>
</tbody>
</table>

the time that the bacteria were in the reactors to 3.5 days, the percent-removal of the phytoestrogens decreased—to 92.2% for genistein and 93.2% for daidzein. Although these removal percentages for 3.5 days of bacterial treatment still seem very high, the drop in removal percentage from those obtained at seven days was statistically significant. In addition, based on our observations in the field, sometimes more than 95% of the influent phytoestrogens needs to be removed to adequately protect the environment from harm.

Interestingly, we also observed in our laboratory work that the degradation of genistein and daidzein appeared to be linked to bacterial ammonia utilization. When ammonia was degraded completely to nitrate in these reactors (a typical process that occurs with long bacterial residence times in wastewater reactors), we observed phytoestrogen degradation of more than 97%; when ammonia degradation was not complete, phytoestrogen degradation decreased. This result provides important information regarding which bacteria and enzymes are involved in phytoestrogens degradation. We are currently performing additional experiments with pure bacterial cultures and enzymatic inhibitors to verify that ammonia-utilizers are important organisms in the phytoestrogen-degradation process.

Finally, we performed additional batch experiments in which we followed the degradation of genistein and daidzein more carefully over time. In these experiments, the degradation of daidzein was coupled with the formation of formononetin. Formononetin is a more potent estrogen than daidzein, thought to be about 4 times more potent in humans and 30 times more potent in fish. This finding highlights the need for more detailed studies on phytoestrogens degradation, and the longer the bacteria stayed in the treatment plant’s biological reactor, the greater the phytoestrogen degradation. These findings suggest that in a wastewater treatment facility where inadequate phytoestrogen removal is occurring, such as we saw at one of the wastewater treatment plants that we sampled, increasing the amount of time that bacteria stay in the wastewater treatment reactor and improving conditions for the bacteria that degrade ammonia should improve phytoestrogen degradation as well. Finally, we found that when one of the common and prevalent phytoestrogens (daidzein) degraded, a more potent phytoestrogen (formononetin) was formed.

Our research findings show that phytoestrogens may be more prevalent and suggests that simply observing the degradation of one phytoestrogen does not provide adequate information regarding “ecological risk.” If a less-potent compound is degraded to a more potent one during standard treatment, we may need to look very carefully at how to improve the treatment of some of these trace contaminants in certain communities.

**Summary and Policy Implications**

We found that phytoestrogens, which are natural estrogen mimics, are present in the wastewater produced by industries, particularly those that process soybeans. We also found that these compounds can be removed by bacterial degradation in wastewater treatment plants. This degradation was linked to ammonia utilization, and suggests that simply observing the degradation of one phytoestrogen does not provide adequate information regarding “ecological risk.” If a less-potent compound is degraded to a more potent one during standard treatment, we may need to look very carefully at how to improve the treatment of some of these trace contaminants in certain communities.

**Summary and Policy Implications**

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The Biology of Endocrine-Disrupting Compounds

The endocrine system is a major regulator of growth, physical development, and sexual development in humans and wildlife. It also plays important roles in ongoing functions, such as cardiovascular and kidney function, and in environmentally induced responses, such as the stress response. The endocrine system works within the body through a complex chemical messaging system. The basic chemical messengers of the endocrine system are known as hormones. Hormones are released from various glands into the bloodstream and travel to receptors in target tissues, where they bind and initiate a response in the target organ or tissue. Any disruption in the normal functioning of this chemical messaging system can result in serious health impacts in one or more of the functions that the endocrine system controls. Metabolism of certain nutrients can be altered, behavioral patterns can change, and sexual differentiation and sexual characteristics can be altered or even reversed.

An endocrine-disrupting compound (EDC) can be defined as any chemical that alters the normal endocrine function of an organism or its offspring. Endocrine disruption occurs when the natural release, transport, or binding of hormones to their receptors in target tissues is disrupted. Endocrine disruption occurs through many mechanisms; two common mechanisms are: (1) the EDC binds to a hormone’s receptor on the surface of cells in the target tissues and creates an unintended response (e.g., egg production in male fish; Figure 2a); or (2) the EDC binds to a hormone’s receptor and blocks the binding of the natural hormone to its intended receptor, stopping the normal response in the cells of the target tissue that would have occurred if the natural hormone were allowed to bind (e.g., the lack of sperm production in male fish; Figure 2b).

in wastewater than previously considered. They also may be responsible for some of the ecological damage that has been observed in the environment, such as disruption of sexual development in fish. More testing of industrial wastewater should occur, and clearer guidelines should be in place regarding the quality of treatment required for the waste from industrial facilities. Facilitating plant upgrades to allow for longer bacterial residence times in controlled reactors could also improve the treatment of these estrogen mimics. Finally, more research should be conducted to determine the biological activity and potency of the degradation products that form as this industrial waste is treated.

From 2007 to 2008, national production of biodiesel increased by approximately 240 million gallons, representing an increase in production of more than 50%. With this rapid expansion of a major plant-processing industry—and one that is known to release phytoestrogens—it is more important than ever to understand the characteristics of industrial effluents and the fate of phytoestrogens under different treatment regimes. Mark S. Lundgren was a graduate student in the Department of Civil Engineering at the University of Minnesota while this study was underway. He currently works as an engineer at Watermark Initiative, LLC. Paige J. Novak is associate professor of civil engineering at the University of Minnesota. Her research focuses on the biological transformation of hazardous substances in sediment, groundwater, and wastewater. She is particularly interested in which organisms perform reactions of interest during wastewater treatment and how external environmental factors influence biodegradation during treatment.

The research upon which this article is based was supported in part by a grant from CURA’s Faculty Interactive Research Program. The program was created to encourage University faculty to conduct research with community organizations and collaborators on issues of public policy importance for state and community. These grants are available to regular faculty at the University of Minnesota and are awarded annually on a competitive basis. Additional support was provided by the Water Environment Research Foundation in the form of the Paul L. Busch Award.
Minnesota is an emerging immigrant-receiving state, receiving notably high numbers of refugees each year. Between 1983 and 2007, Minnesota had the fourth largest number of new refugee arrivals, behind only Florida, California, and Texas. In addition to those who resettle directly in Minnesota, data from the federal Office of Refugee Resettlement indicate that Minnesota has the largest secondary in-migration of refugees in the nation.1

A well-developed social-service industry, state-aid programs, an existing refugee community, and the availability of unskilled jobs make Minnesota an attractive resettlement option.

Twin Cities metropolitan area is currently home to the largest community of Somali immigrants in the nation. After the collapse of Somali dictator Siad Barre’s government early in 1991, factional fighting and violence displaced hundreds of thousands of Somalis. Despite many attempts, the country still lacks a stable government capable of bringing peace to the region. As a result of this instability, most Somalis who now live in Minnesota came to the United States as refugees, many directly from refugee camps. Between 1983 and 2007, Minnesota had the largest number of new Somali immigrants in the United States (Figure 1). Estimates of the size of the Somali community in the Twin Cities vary, ranging from the State Demographic Center’s 2004 estimate of 25,0002 to substantially higher estimates (around 40,000) made by nonprofits and Somali community organizations.3

Some Somalis in Minnesota have established businesses quite successfully.4

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3 Online at the Confederation of Somali Community in Minnesota, www.cscmn.org/about.html.

In the Twin Cities metro area alone, we have identified at least 375 Somali-owned businesses. This high level of entrepreneurship is a remarkable achievement for a community that arrived quite recently, has endured many years of a brutal conflict, has relatively low levels of socioeconomic resources, and entered the United States as a racial and religious minority. As refugees become an increasingly established part of the Twin Cities community—and immigrant flows show no signs of slowing—it is important to understand what facilitates immigrants’ long-term socioeconomic success.

This article presents findings from in-depth surveys with 90 Somali and 45 American-born entrepreneurs in Minneapolis, exploring what may facilitate or hinder the success of their businesses. Our study focused on how environmental factors and group characteristics interact to influence Somali business development, practices, and financing, and how and why Somalis may differ from other entrepreneurs on these dimensions. We focused on two factors that distinguish recent Somali immigrants from other groups of immigrants: their religiosity and their racial identity. Because our study was completed in the Twin Cities metropolitan area, a unique environmental characteristic—a large number of nonprofit organizations that can provide business training and other resources—may have contributed to the success of Somali entrepreneurs. In our study, we considered the impact of religion, race, and resources on Somali business enterprises, and also explored how businesses owned by Somali women differed from those owned by men.

The research upon which this article is based was supported in part through a grant from CURA’s Faculty Interactive Research Program. Additional funding was provided by the Graduate Research Partnership Program.

Methodology
To learn more about Somali entrepreneurial achievements and challenges, in 2009 we administered surveys to 90 Somali business owners and 45 non-migrant (American-born) business owners in Minneapolis. The research team compiled a database of Somali-owned businesses in Minneapolis and St. Paul based on state Department filings, local phonebooks, conversations with key informants, newspaper articles and advertisements from general circulation and Somali newspapers, and keyword searches on the Internet. As shown in Figure 2, there are sizeable concentrations of Somali businesses in Minneapolis. We weighted the sample more heavily toward street-front businesses because we were particularly interested in businesses that required significant start-up capital. We divided street-front businesses by their seven ZIP code zones and, to the extent possible, Jama

sampled every other storefront business, although the geographic layout of businesses (multilevel-buildings, people working out of homes, etc.) did not always make this possible. The sample is thus geographically distributed to match the locations where Somali-owned businesses operate. Most of the interviews were conducted in Cedar-Riverside and South Minneapolis, including areas along Franklin Avenue, Lake Street, and Nicollet Avenue. Just two Somali and three non-migrant entrepreneurs who were approached refused to participate.

To create the control group, we selected every second Somali-owned business Jama surveyed and found the closest business not owned by an immigrant. For the control group, Golden excluded businesses that opened before 1995 to more closely resemble the characteristics of the Somali businesses surveyed. The detailed data we collected through the surveys allowed us to address areas of interest to social scientists, nonprofit organizations, and policy makers.

Results
This section briefly summarizes our findings from the interviews.

Demographics. All 90 Somali entrepreneurs we interviewed were born in Somalia and spoke Somali as their first language. Compared to the control group (non-migrant) business owners we interviewed, the Somali respondents on average were younger and had less education. More Somali entrepreneurs were embedded in close social relationships compared with the control group business owners (Table 1, p. 46). Somali respondents were more likely to be married (78.9% versus 57.8%), and had on average more adult and minor dependents in the United States than control group respondents. In addition, almost all Somali entrepreneurs in the sample had dependents outside of the United States (compared to none of the control group respondents). These findings suggest that Somali entrepreneurs may depend more heavily on their businesses than their control group counterparts. Because the control group members were more likely to be under 40 and have a college degree, entrepreneurs in this group could more likely find alternative means of support should their businesses fail. In addition, the control group interviewees did not have as many people dependent on the success of their businesses as the Somali entrepreneurs did.

The Somali entrepreneurs who we interviewed were significantly less likely than the control group entrepreneurs to have any other source of income in addition to their businesses (Table 1). When asked how important “providing family support” was in their decision to go into business for themselves, the overwhelming majority of the Somali sample said it was “extremely important,” whereas less than one-third of the control group business owners gave this response. These findings suggest that Somali entrepreneurs rely more heavily on their businesses as a means to support their families than do non-migrant business owners.

Remittances, Types of Businesses, and Income. When we asked Somali business owners about remittances (money sent to support family or friends overseas), we found that remitting was widespread among Somalis. All but one Somali entrepreneur we interviewed reported sending money to family or friends outside of the United States. Because we previously found that Somali business owners supported more people in the United States than did non-migrant business owners (Table 1), the remittances that Somali business owners sent overseas suggests that they support a greater number of dependents overall compared with American-born business owners. We asked respondents who sent remittances what percentage of their monthly earnings they sent to family or other individuals in other countries. Responses ranged from 1% to 95% of their monthly earnings, with a mean of 24%. Despite the large amounts already being sent, most Somalis indicated that they wished they could send a greater percentage than they currently did. Overseas remittances were part of doing business for these individuals.

Our results indicate that not only do these entrepreneurial Somali individuals rely on the success of their businesses, but so do their extended networks. Understanding what helps Somali businesses succeed is likely to have far-reaching implications for their dependents, both within and outside of the United States.

In addition to basic differences in the respondents’ demographic characteristics, the types of businesses owned by Somalis differed significantly from those owned by non-migrants. Approximately two-thirds of the Somali entrepreneurs we interviewed owned businesses in wholesale or retail trade, and the remaining one-third owned businesses that were service-oriented, offering personal, business, or repair services. Comparatively, the control sample of entrepreneurs had fewer retail businesses: approximately 44% owned retail businesses, 42% provided services, 11% provided entertainment or recreation, and 2% (one business) provided
manufacturing services. The distribution of Somali business types may indicate that Somali consumers have unique needs not being met by other, non-Somali retailers, or it may indicate that Somali retail entrepreneurs are operating in a saturated market, and may benefit from creatively branching out in business types.

When we asked entrepreneurs to report their gross income before expenses in 2007, we found significant differences between the business income of our respondents. More than two-thirds of the Somali businesses had income less than $100,000, whereas more than two-thirds of the control respondents had income greater than $100,000 (Table 1). When we stratified the Somali respondents’ business income by business location or the gender of the business owner, we found that businesses that operated in malls had lower income than storefront businesses, and that female-owned Somali businesses had lower income than those owned by men (Table 2).

**Religion.** The majority of Somali people are Muslim, and every member of our Somali entrepreneur sample reported being raised a Muslim as well as being a currently practicing Muslim (Table 1). This identity is important, because Islamic tenets may influence business decisions. For example, Islam places some limits on credit transactions, which can create barriers for raising capital and saving money in the American context. In addition, Islam may influence other decisions, such as which types of products to sell. The precise interpretation of the Koran concerning credit varies across and within Islamic communities. An objective of our study was to outline the range of interpretations and identify the overall effect of this religious precept, particularly on decisions about financing.

Although the entire Somali sample in our study was Muslim, none of the control group respondents were (Table 1). This difference is important, because Islamic beliefs may influence business decisions. For example, Islam places some limits on credit transactions, which can create barriers for raising capital and saving money in the American context. In addition, Islam may influence other decisions, such as which types of products to sell. The precise interpretation of the Koran concerning credit varies across and within Islamic communities. An objective of our study was to outline the range of interpretations and identify the overall effect of this religious precept, particularly on decisions about financing.

| Table 1. Demographic Characteristics of Somali and Non-Migrant Entrepreneurs |
|---------------------------------|-----------------|-----------------|
| **Have less than high school education** | Somali | Non-Migrant |
| (n = 88, n = 45) | 30.7% | 0% |
| **Have college degree (or higher)** | Somali | Non-Migrant |
| (n = 88, n = 45) | 14.8% | 71.1% |
| **Married** | Somali | Non-Migrant |
| (n = 90, n = 45) | 78.9% | 57.8% |
| **Under 40 years old** | Somali | Non-Migrant |
| (n = 90, n = 45) | 20.0% | 46.7% |
| **Female** | Somali | Non-Migrant |
| (n = 89, n = 45) | 37.1% | 22.2% |
| **Have dependents outside U.S.** | Somali | Non-Migrant |
| (n = 89, n = 45) | 98.9% | 0% |
| **Have dependents in the U.S.** | Somali | Non-Migrant |
| (n = 89, n = 45) | 71.9% | 64.4% |
| **Adult dependents (means)** | Somali | Non-Migrant |
| (n = 89, n = 45) | 2.2 | 1.7 |
| **Child dependents (means)** | Somali | Non-Migrant |
| (n = 89, n = 45) | 3.4 | 1.6 |
| **Have income besides business** | Somali | Non-Migrant |
| (n = 89, n = 45) | 18.9% | 53.3% |
| **How important was “providing family support” in decision to open business** | Somali | Non-Migrant |
| (n = 89, n = 45) | Extremely important: 89.9% | 26.7% |
| | Somewhat important: 9.0% | 24.4% |
| | Not important at all: 1.1% | 48.9% |
| **Current religious affiliation** | Somali | Non-Migrant |
| (n = 90, n = 45) | Muslim: 100% | 0% |
| | Catholic or Protestant Christian: 0% | 51.1% |
| | Jewish: 0% | 4.4% |
| | None, atheist, or agnostic: 0% | 33.3% |
| | Something else: 0% | 11.1% |
| **Gross Annual Income** | Somali | Non-Migrant |
| (n = 83, n = 39) | $20,000 or less: 41.0% | 0% |
| | $20,001 to $100,000: 31.3% | 17.9% |
| | $100,001 to $500,000: 16.9% | 48.7% |
| | $500,001 or more: 10.8% | 33.3% |
| **Self-described race** | Somali | Non-Migrant |
| (n = 66, n = 45) | Somali, Somali American: 16.7% | 0% |
| | Black, Black American, African American: 83.3% | 17.8% |
| | White, Caucasian, European American: 0% | 68.9% |
| | Asian: 0% | 2.2% |
| | Other or mixed: 0% | 11.1% |

Note: The number of responses (n) reported for each row are for Somali and non-migrant entrepreneurs, respectively. *Results are statistically significant at the 90% level of confidence, which means there is a less than 10% probability that the difference in values is a result of chance.
influenced the business practices of Somali entrepreneurs, we had intended to compare the business practices of more religious Somalis with those who were less religious. However, our results indicated no variation within the sample on religiosity, so we were unable to explore this issue.

Nevertheless, the uniformity of religious affiliation and the tremendous importance of religion for the Somalis who participated in our study (Table 3) provided important information. These shared characteristics may signify a very tight-knit immigrant community. We might therefore expect other Somalis or Muslims to be suppliers of the products local Somali entrepreneurs sell. Somalis may prefer to work with individuals who understand Islamic religious restrictions on credit. The religious characteristics we identified may also imply that Somalis actively confer with one another about their interpretations of Islam. Hence, we might expect considerable uniformity across the group in terms of interpretations of Islam. All of these issues are likely to affect how Somalis conduct their businesses.

To address these implications, we initially asked Somali entrepreneurs if “religious restrictions on credit had been a consideration when seeking financial assistance.” After 20 interviews, we dropped this question because it was too sensitive. Some Somali business owners reported that they felt they had compromised their religious beliefs to start their businesses and talking about this made them uncomfortable. Of the 20 Somali entrepreneurs who answered this question, 15 (75.0%) said religious beliefs prevented them from seeking credit. We also found that the vast majority of Somalis said that they were uncomfortable borrowing with interest, compared with less than one-third of the control group entrepreneurs who felt the same way (Table 3). Similarly, more than 80% of Somalis said that they were uncomfortable maintaining an insured savings account, whereas none of the non-migrant entrepreneurs was uncomfortable with this practice. Somalis’ discomfort with these financial activities is likely related to their religious beliefs. Providing Islamic-compliant capital

<table>
<thead>
<tr>
<th>Location (for Somali sample only)*</th>
<th>$20,000 or less</th>
<th>$20,001 to $100,000</th>
<th>$100,001 to $500,000</th>
<th>$500,001 or more</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storefront ($n=43)</td>
<td>32.6%</td>
<td>25.6%</td>
<td>23.3%</td>
<td>18.6%</td>
</tr>
<tr>
<td>Mall ($n=40)</td>
<td>50.0%</td>
<td>37.5%</td>
<td>10.0%</td>
<td>2.5%</td>
</tr>
</tbody>
</table>

| Gender (for Somali sample only)* | | | | |
|----------------------------------| | | | |
| Male ($n=49)                     | 24.5%           | 34.7%             | 24.5%             | 16.3%           |
| Female ($n=33)                   | 66.7%           | 27.3%             | 6.1%              | 0%              |

Table 2. Business Location, Gender, and Gross Business Income of Somali Entrepreneurs

Note: Rows may total to more or less than 100% due to rounding.

*Results are statistically significant at the 90% level of confidence, which means there is a less than 10% probability that the difference in values is a result of chance.

<table>
<thead>
<tr>
<th>Importance of religious beliefs*</th>
<th>Somali</th>
<th>Non-Migrant</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extremely important</td>
<td>98.9%</td>
<td>48.9%</td>
</tr>
<tr>
<td>Somewhat important</td>
<td>1.1%</td>
<td>24.4%</td>
</tr>
<tr>
<td>Not very important</td>
<td>0%</td>
<td>11.1%</td>
</tr>
<tr>
<td>Not important at all</td>
<td>0%</td>
<td>15.6%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Uncomfortable borrowing with interest*</th>
<th>Somali</th>
<th>Non-Migrant</th>
</tr>
</thead>
<tbody>
<tr>
<td>($n=86, n=45)</td>
<td>93.0%</td>
<td>26.6%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Uncomfortable with insured savings account*</th>
<th>Somali</th>
<th>Non-Migrant</th>
</tr>
</thead>
<tbody>
<tr>
<td>($n=86, n=45)</td>
<td>80.2%</td>
<td>0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Had financial barriers to starting business</th>
<th>Somali</th>
<th>Non-Migrant</th>
</tr>
</thead>
<tbody>
<tr>
<td>($n=88, n=45)</td>
<td>51.1%</td>
<td>57.8%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Financing is a barrier to expansion*</th>
<th>Somali</th>
<th>Non-Migrant</th>
</tr>
</thead>
<tbody>
<tr>
<td>($n=88, n=18)</td>
<td>90.9%</td>
<td>50.0%</td>
</tr>
</tbody>
</table>

Table 3. Religion and Financial Barriers for Somali and Non-Migrant Entrepreneurs

Note: The number of responses (n) reported in column 1 are for Somali and non-migrant entrepreneurs, respectively. Column totals may not sum to 100% due to rounding.

*Results are statistically significant at the 90% level of confidence, which means there is a less than 10% probability that the difference in values is a result of chance.
Discrimination is easily identifiable, and coworkers while employed. Overt discrimination includes being passed over for a job because of one’s race or discrimination may operate with more subtlety, however. For example, one aspect of immigrant businesses is that discrimination may be manifested in two different ways: overt discrimination or blocked mobility. Examples of overt discrimination include being passed over for a job because of one’s race or enduring racist remarks from supervisors and coworkers while employed. Overt discrimination is easily identifiable, whereas blocked mobility can be harder to recognize. Blocked mobility results from structural inequalities or limited opportunities available to individuals because of their racial identity, and may not be immediately apparent to the individual. Some research has shown that first-generation black immigrants experience racial discrimination, but to a lesser extent than native-born black Americans.6 We were interested in the degree to which Somali business owners perceived they had been victims of racial discrimination, if ever. In our study, we found that the Somali entrepreneurs we interviewed rarely reported experiencing overt discrimination, but reported experiences that may represent blocked mobility.

When we asked Somali entrepreneurs in an open-ended question to describe their race, 83.1% of Somali respondents said “Black,” “Black American,” or “African American,” whereas the remaining respondents said “Somali” or “Somali American,” claiming “Somali” as part of their racial identity (Table 1). Among the control group of entrepreneurs, 68.9% (31 people) self-identified as White, 17.8% (8 people) as Black, and the remaining 13.3% (6 people) as some other racial group. We were particularly interested in how the black Americans in the control group experienced discrimination compared with Somali-born blacks. Our results must be interpreted cautiously. First, the number of black Americans in the sample was small, and second, Somali responses may reflect a lack of cultural awareness of discrimination rather than its actual absence.

Of the three groups surveyed (Somali entrepreneurs, black control group entrepreneurs, and nonblack control group entrepreneurs), none contained many individuals who perceived themselves as victims of overt racial discrimination (Table 4). In response to an open-ended question concerning barriers to starting their business, respondents did not mention overt discrimination frequently, and Somali respondents in particular rarely identified discrimination as a barrier; one-quarter (25%) of black control group entrepreneurs mentioned discrimination, compared with roughly 1 in 10 (10.8%) of nonblack control group entrepreneurs, and only one Somali respondent (1.1%). Racial discrimination may operate with more subtlety, however. For example, one aspect of immigrant businesses is that they are sometimes opened, at least in part, because discrimination foreclosed other profitable employment options for their owners.

### Table 4. Motivations of Somali and Non-Migrant Entrepreneurs that May Relate to Racial Discrimination

<table>
<thead>
<tr>
<th></th>
<th>Somali (n = 88)</th>
<th>Black control group (n = 8)</th>
<th>Nonblack control group (n = 37)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mentioned discrimination as a barrier to starting business*</td>
<td>1.1%</td>
<td>25.0%</td>
<td>10.8%</td>
</tr>
<tr>
<td>Thought owning a business would be more profitable than working for others*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extremely important</td>
<td>70.8%</td>
<td>37.5%</td>
<td>44.4%</td>
</tr>
<tr>
<td>Somewhat important</td>
<td>29.2%</td>
<td>50.0%</td>
<td>27.8%</td>
</tr>
<tr>
<td>Not important at all</td>
<td>0%</td>
<td>12.5%</td>
<td>27.8%</td>
</tr>
<tr>
<td>Why did you decide to go into business?</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Greater yield or profit*</td>
<td>41.6%</td>
<td>0%</td>
<td>2.7%</td>
</tr>
<tr>
<td>Lacked other options†</td>
<td>15.7%</td>
<td>37.5%</td>
<td>21.6%</td>
</tr>
<tr>
<td>Reported danger of failing in last three years*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(n = 84, n = 6, n = 33)</td>
<td>40.5%</td>
<td>100%</td>
<td>48.5%</td>
</tr>
</tbody>
</table>

Note: The number of responses (n) reported in column 1 for the last row are for Somali, non-migrant black, and non-migrant nonblack entrepreneurs, respectively.

*Results are statistically significant at the 90% level of confidence, which means there is a less than 10% probability that the difference in values is a result of chance.

†For example, an inability to find salaried employment.

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To investigate this aspect of entrepreneurs’ experiences, we asked respondents how important each of a list of items was for them in deciding to go into business. If individuals had tried working for others, but were not able to find employment that compensated them adequately, this experience may indicate discrimination in hiring or pay. To address this issue, we asked respondents the extent to which they agreed or disagreed with the following statement: “I thought running a business would be more profitable than working for others.” We observed a significant difference between Somali and control group respondents: more than two-thirds (70.8%) of Somalis thought this aspect was extremely important in their decision to start a business, compared with less than half (44.4%) of nonblack control group respondents and about one-third (37.5%) of black control group respondents.

Similarly, when we asked an open-ended question about why they went into business, the Somali entrepreneurs we interviewed were much more likely to mention greater yield or profit as a motivation: almost half (46.7%) of Somalis said this was a factor in their decision, whereas greater yield or profit seemed to be virtually a nonissue for the control group (no black control group entrepreneurs mentioned it as motivation, and only one nonblack control group entrepreneur mentioned it). Although these data are not evidence that racial discrimination depresses wages for Somalis (thus providing the impetus to open a business), they are consistent with that possibility. Interestingly, however, in the same open-ended question, Somalis mentioned blocked mobility scenarios (such as inability to find work, “disadvantage,” problems in a previous job, “necessity,” getting fired, or having “nothing better to do”) less frequently than the control group did: 15.7% of Somali respondents mentioned these types of situations, compared with 37.5% of the black and 21.6% of the nonblack control group respondents.

Finally, we observed significant differences among the three subgroups we surveyed as to whether or not the respondents indicated that their business had been in danger of failing recently: Whereas all of the black control group respondents reported recent danger of failure, less than half of nonblack control group respondents (48.5%) and Somali respondents (40.5%) reported being in the same situation.

Although the group of black control group respondents was small, their experiences in terms of possible business failure were remarkably different from those of the Somali entrepreneurs. These data suggest that Somali entrepreneurs may experience less trouble in their businesses than their black-American counterparts do or, on the contrary, that these groups may face similar hardships, but the Somali business owners may be more optimistic about their success. In combination, the responses to survey questions about race and discrimination demonstrated differences in how Somali and American-born black entrepreneurs experience racial discrimination, but no consistent pattern emerged.

**Resources.** The data that we collected through our surveys provided insight into the use of business resources available to Minneapolis Somali entrepreneurs, as well as some indication of the impact of these resources on the success of businesses owned by immigrants. Minnesota is unique from other refugee-receiving states in the high level of federal support that its public and private nonprofit resettlement agencies receive. The Office of Refugee Resettlement administers discretionary grants for refugee community resettlement, and organizations in Minnesota received more than $2.5 million of these grants in 2007. These funds were distributed among 15 organizations that specifically serve refugee communities, such as the Confederation of Somali Community in Minnesota, the Minnesota African Women’s Association, and the Somali International Minorities of America. As a point of comparison, sizable Somali communities exist in both Ohio (Columbus) and Washington (Seattle), but those two states each received less than $600,000 in community resettlement grants in 2007, distributed to just three and four organizations, respectively. This distinction is important, because these organizations, which are relatively well-supported in Minnesota, provide crucial resources for refugee entrepreneurs.

We found that Somali entrepreneurs were less likely than control business owners to maintain bank accounts for their businesses (Table 5). This finding may indicate a degree of informality in Somali businesses, but may also suggest that the typical institutions used by business owners do not meet the needs of Somali entrepreneurs. A third alternative is that Somalis may prefer institutions that offer options compliant with Islamic financial restrictions.

We asked respondents if they had completed any training, such as workshops, seminars, or courses, related to running a business, and found that Somalis were less likely to have received business training (40.2% of Somali entrepreneurs, compared with 62.2% of the control group entrepreneurs). For both groups of entrepreneurs, those with business training were significantly more likely to have written a business plan, which can help entrepreneurs be successful over time, than those who had not written a business plan.

| Table 5. Business Resources Used by Somali and Non-Migrant Entrepreneurs |
|-----------------------------|-----------------------------|-----------------------------|
|                             | Somali                      | Non-Migrant                 |
| Have business bank accounts*| 69.7% (n = 89, n = 45)       | 95.6% (n = 90, n = 45)       |
| Have business training*     | 40.4% (n = 89, n = 45)       | 62.2% (n = 90, n = 45)       |
| Have a group of business owners to talk with | 60.2% (n = 88, n = 45) | 57.8% (n = 90, n = 45) |
| Would participate in another business owners’ forum* (n = 86, n = 45) | 83.7% | 60.0% |
| Have specific plans for growth in next 2-3 years* (n = 82, n = 41) | 42.7% | 70.7% |

Note: The number of responses (n) reported in column 1 are for Somali and non-migrant entrepreneurs, respectively.

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Somali entrepreneurs with business training were also significantly less likely to have reported having been in danger of their business failing: roughly half (48.0%) of Somali business owners without business training had been in danger of failing, compared with only one-quarter (27.3%) of Somali business owners with business training. In the control group of entrepreneurs, we did not observe a statistically significant difference in reported danger of failing between those business owners with and without training. For Somali respondents in particular, receiving business training appeared to be an extremely important component in the success of their businesses.

Being actively engaged in networks of business owners can also contribute to success and provide a forum to share ideas and seek input to overcome challenges. When we asked respondents if they have a group of business owners with whom they regularly talk about business issues, we found no significant difference between Somali and control group respondents. Encouragingly, more than half of the respondents in both groups reported talking regularly about business with other entrepreneurs. However, when we asked, “If there were another forum to share ideas and experiences among business owners, would you participate?,” significantly more Somali respondents said they would, compared with non-migrant respondents.

Despite all of the Somali entrepreneurs we talked to reporting that they wanted to grow their business in the next few years, less than half had a clear idea of how to do so, whereas more than two-thirds of the control group entrepreneurs had specific plans for growth. This difference could indicate that Somali entrepreneurs are less well connected than non-migrant entrepreneurs to resources that can help them plan for the long-term success of their businesses.

Gender. Finally, we found significant differences between the business practices of male and female Somali entrepreneurs. In general, businesses owned by Somali women tended to be less formal than those owned by men. Women were more likely to operate their businesses in malls, whereas men more often owned storefront businesses (Table 7). Somali malls, called suuqs, are filled with shops and smaller retail stalls that can be rented out by business owners, and the malls tend to cater to a specifically Somali clientele. They offer a more “low-risk” location than a storefront location. We found that Somali women entrepreneurs were less likely than men to have a written business plan and were less likely to maintain bank accounts for their business; in fact, our survey data indicated that more than two-thirds of female Somali entrepreneurs had neither a business plan nor business bank accounts. In addition, survey responses indicated that fewer female Somali entrepreneurs had business training and talked regularly with other business owners than male Somali entrepreneurs. Female Somali business owners also had fewer employees than their male counterparts. These results could mean that female entrepreneurs are less successful than men, or that Somali women operate a different kind of (less formal) business than men do. This latter hypothesis may be supported by the finding that Somali women were not more likely than men to report their business as having been in danger of failing in recent years.

Policy Implications and Recommendations

The success of immigrant entrepreneurs is important to the long-term success of their communities. Despite facing language barriers, cultural misunderstandings, racial and religious difficulties, and an unfamiliar labor market, their small businesses offer a potential pathway to economic success. Previous research suggests that forming businesses can help immigrants integrate

<table>
<thead>
<tr>
<th>SOMALIS</th>
<th>With business training (n = 36)</th>
<th>Without business training (n = 53)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have written business plan*</td>
<td>48.6%</td>
<td>17.0%</td>
</tr>
<tr>
<td>Been in danger of failing*</td>
<td>27.3%</td>
<td>48.0%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CONTROL GROUP</th>
<th>With business training (n = 28)</th>
<th>Without business training (n = 17)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have written business plan*</td>
<td>75.0%</td>
<td>47.1%</td>
</tr>
<tr>
<td>Been in danger of failing</td>
<td>63.0%</td>
<td>41.7%</td>
</tr>
</tbody>
</table>

*Results are statistically significant at the 90% level of confidence, which means there is a less than 10% probability that the difference in values is a result of chance.
into the community,8 contribute to solid economic growth and increasing business formation,9 create social solidarity within the immigrant community,10 and provide upward mobility for the second generation.11 Because of these potential benefits, it is important to think seriously about what facilitates long-term immigrant business success. The opportunities available in the local community play a significant role in determining whether immigrants will be successful in their business ventures.12

Our study of Somali and American-born entrepreneurs explored struggles that are unique to Somali immigrants, and our findings suggest that religion and community resources play greater roles in Somali-business owners’ experience than race does. Knowing the degree to which Somali refugee families depend on the success of their business ventures, local organizations should work to develop programs to help these businesses succeed. Understanding their business successes—and shortfalls—can contribute to a broader understanding of immigrant and refugee entrepreneurship among other groups and in other locations.

Table 7. Business Practices of Somali Entrepreneurs Stratified by Gender

<table>
<thead>
<tr>
<th></th>
<th>Somali men</th>
<th>Somali women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Located in a mall* (n = 56, n = 33)</td>
<td>32.1%</td>
<td>69.7%</td>
</tr>
<tr>
<td>Have a written business plan* (n = 55, n = 33)</td>
<td>43.6%</td>
<td>9.1%</td>
</tr>
<tr>
<td>Have business bank accounts* (n = 55, n = 33)</td>
<td>92.7%</td>
<td>30.3%</td>
</tr>
<tr>
<td>Have had business training* (n = 55, n = 33)</td>
<td>56.4%</td>
<td>15.2%</td>
</tr>
<tr>
<td>Have nonfamily employees* (n = 56, n = 33)</td>
<td>41.1%</td>
<td>12.1%</td>
</tr>
<tr>
<td>Have business owners to talk with* (n = 54, n = 33)</td>
<td>68.5%</td>
<td>45.5%</td>
</tr>
<tr>
<td>Reported danger of failing in last three years (n = 53, n = 30)</td>
<td>41.5%</td>
<td>40.0%</td>
</tr>
</tbody>
</table>

Note: The number of responses (n) reported in column 1 are for Somali men and Somali women entrepreneurs, respectively.

*Results are statistically significant at the 90% level of confidence, which means there is a less than 10% probability that the difference in values is a result of chance.

Shannon Golden is a doctoral student in the Department of Sociology at the University of Minnesota. Her research interests include forced migration, human rights, and postconflict reconciliation. Elizabeth Hegner Boyle is associate professor of sociology and law at the University of Minnesota. She has studied the effect of post-9/11 immigration law reforms on immigrant communities in the Twin Cities and the effect of law on the practice of female genital cutting. Her other research interests include women and children’s rights in international law. Yasin Jama received his master of public health degree in 2008 from the University of Minnesota.

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For more detailed or comprehensive results, please contact Elizabeth Boyle at boyle014@umn.edu.
Kris Nelson, director of neighborhood programs at CURA, was presented with the University’s Outstanding Staff Community Service Award at a reception on April 20 at the Campus Club. The award is given by the Office of Public Engagement to a staff member who has made an extraordinary, significant contribution to the betterment of society.

“Kris personifies the idea of an engaged University,” CURA Director Ed Goetz said in nominating Nelson for the award. “He has demonstrated a sustained commitment to community-based organizations, believing them to be the life-blood of a democratic society and vital partners for the University. Kris has devoted time, energy, and imagination to connecting the University to these groups and helping the University make good on its commitment to engagement with its urban community.”

During his 17 years at CURA, Nelson has been involved in a range of projects growing out of his familiarity with the University and community organizations, including creating Neighborhood Partnerships for Community Research (NPCR), a consortium of CURA and eight Twin Cities higher educational institutions that provides student and faculty research and technical assistance to community-based organizations; initiating an early-warning system to identify properties at risk for abandonment in Minneapolis; coordinating the Community Outreach Partnership Center (COPC), a collaboration with Macalaster College and Metropolitan State University that supported students and faculty to work with community organizations on St. Paul’s East Side; securing funding from the U.S. Department of Commerce for an internet-based web mapping system that shows the relationships among housing, transportation, and jobs in the Twin Cities metro area; and participating in the University District Alliance, a partnership among the five University neighborhoods concerned with housing, commercial development, and near-to-campus livability issues.